

# Service Manual

## Nakamichi Receiver 2



## CONTENTS

1. General	1
2. Removal Procedures	3
2. 1. Top Cover Ass'y	3
2. 2. Bottom Cover Ass'y	3
2. 3. Sealing Panel	3
2. 4. Front Panel Ass'y	4
2. 5. Front Chassis Ass'y	4
2. 6. Display & Control P.C.B. Ass'y and Audio Mute P.C.B. Ass'y	4
2. 7. System Remote P.C.B. Ass'y	4
2. 8. Power Supply P.C.B. Ass'y	4
3. Parts Location for Electrical Adjustment	5
4. Electrical Adjustments	5
4. 1. Power Amplifier Section	5
4. 2. Tuner Section	6
5. Mechanism Ass'y and Parts List	9
5. 1. Synthesis	9
5. 2. Front Chassis Ass'y (A01)	10
5. 3. Chassis Ass'y (A02)	11
5. 4. Heat Sink Ass'y (B01)	12
6. Mounting Diagrams and Parts List	13
6. 1. AC Outlet P.C.B. Ass'y	13
6. 2. Power Switch P.C.B. Ass'y	13
6. 3. Volume LED P.C.B. Ass'y	13
6. 4. Audio Mute P.C.B. Ass'y	13
6. 5. Headphone P.C.B. Ass'y	14
6. 6. Motor Volume P.C.B. Ass'y	14
6. 7. Selector P.C.B. Ass'y	14
6. 8. Speaker Terminal P.C.B. Ass'y	14
6. 9. Power Supply P.C.B. Ass'y	15
6. 10. Display & Control P.C.B. Ass'y	16
6. 11. System Remote P.C.B. Ass'y	16
6. 12. Main P.C.B. Ass'y	17
7. Schematic Diagrams	19
7. 1. IC Block Diagrams	19
7. 2. Schematic Diagrams	21
(1) Tuner Section	21
(2) Amplifier Section	22
8. Wiring Diagram	23
9. Block Diagrams	24
9. 1. Tuner & Display Control Section	24
9. 2. Amplifier Section	25
10. Specifications	26

## 1. GENERAL

### 1.1. Production No.

Production No.: D113

### 1.2. Destinations

USA, CAN, EP, UK, AUS, OTR, JPN

#### Abbreviation

USA — U.S.A.	AUS — Australia
CAN — Canada	OTR — Other
EP — Europe	JPN — Japan
UK — United Kingdom	

### 1.3. Parts Supply

#### (1) Unstocked Parts


Parts marked with "★" at the head of part No. are not stocked. So, it takes time to supply the parts after we receive your order.

#### (2) Unsupplied Parts

Parts without part Nos. (indicated as "—" in the parts list) are not supplied.

#### 1.4. CAUTIONS/WARNINGS

##### (1) Product Safety Notice

Parts marked with the symbol  in the schematic diagram have critical characteristics.

Use **ONLY** replacement parts recommended by the manufacturer.

It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

##### (2) Leakage Current Check/Resistance Check

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp, or if the resistance from chassis to either side of the power cord is less than 240 k ohms, the unit is defective.

**WARNING** — DO NOT return the unit to the customer until the problem is located and corrected.

##### (3) Lithium Battery Caution

Use **ONLY** replacement parts recommended by the manufacturer. Replacement must be done only by qualified service personnel because of risk for explosion.

#### WARNING

Litiumbatteri. Explosionsfara vid felaktig hantering. Byte får endast ske av sakkunnig personal enligt servicedokumentationens anvisningar.

#### ADVARSEL!

Lithiumbatterier. Eksplosionsfare. Udskiftning må kun foretages af en sagkyndig og som beskrevet i servicemanualen.

batterierne kun må udskiftes med batterier af samme fabrikat og type.

##### (4) Resetting the MPU After Repair

When the Receiver 2 does not work properly with the button operation after repair or after replacing the battery (the display shows abnormal indication), reset the Micro-processing Unit (MPU) U001 ( $\mu$ PD75208CW-A77) on the Display & Control P.C.B. Ass'y as follows:

1. With the power turned ON, ground the Reset Point on the Display & Control P.C.B. Ass'y.  
(See Fig. 6.10 Reset Point: Positive side of C002.)
2. Since the memory contents are cleared, reset them again.

#### VOLTAGE SELECTOR

Voltage selector is installed on the Rear Panel. The voltage selector can select 110, 120, 220, or 240V at customer's disposal.

#### 1.5. Package Ass'y

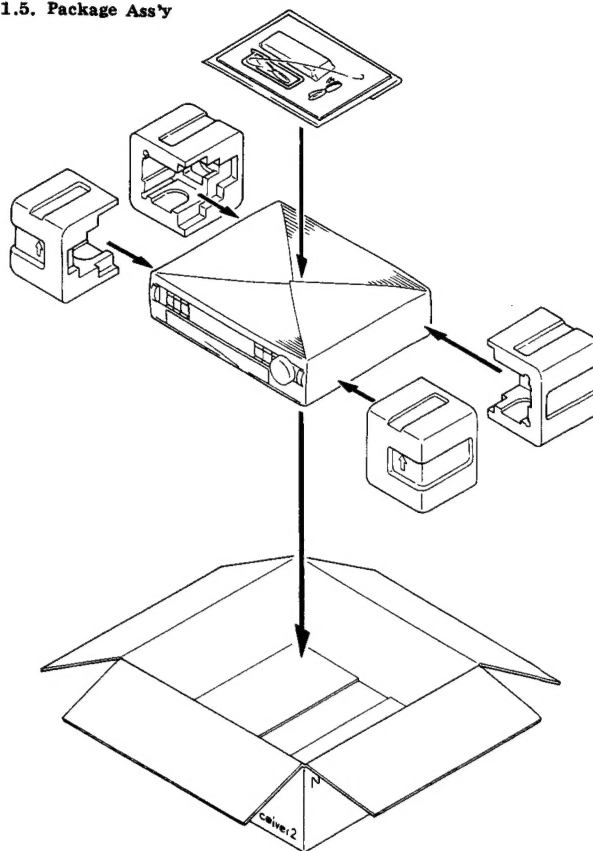


Fig. 1.1

Note: When shipping, the side packings as shown in Fig. 1.1 are used. However, front packing and rear packing listed are supplied as spare parts.

Schematic Ref. No.	Part No.	Description	Qty
	—	Package Ass'y	
	0F04498A	Front Packing	1
	0F04499A	Rear Packing	1
	0F04493A	Carton	1

## 1.6. Accessory Ass'y

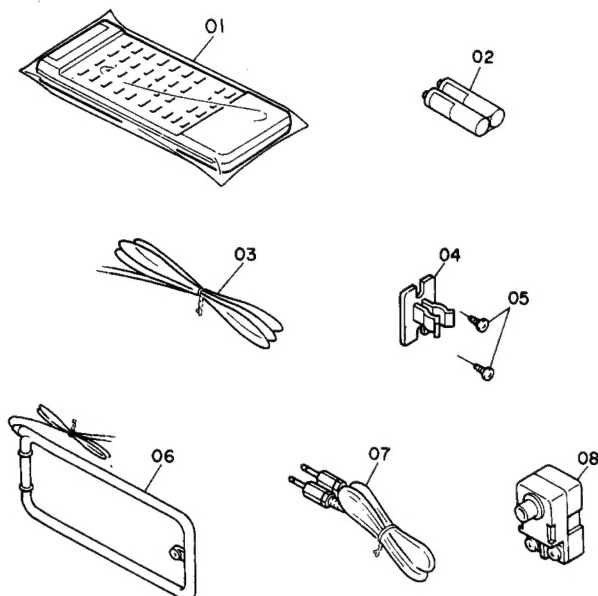


Fig. 1.2

Schematic Ref. No.	Part No.	Description	Qty
	CA81707A	Accessory Ass'y (USA, CAN, OTR)	1
	CA81801A	Accessory Ass'y (EP, UK, AUS)	1
	DA04446A	Accessory Ass'y (JPN)	1
01	CA81723A	Remote Control Unit	1
02	0B90341A	Battery AA Typex2	1
03	0C85437A	Feeder Antenna (USA, CAN, AUS, OTR)	1
	0B90320A	Feeder Antenna (EP, UK, JPN)	1
04	0B90319A	Loop Antenna Holder	1
05	0E03659A	3x12 @ Tapping (Black Chromate)	2
06	0C85374A	AM Loop Antenna	1
07	0C85415A	Remote Control Cable	1
08	0B90208A	Antenna Adapter (EP, UK)	1
	0B90194A	Antenna Adapter F (JPN)	1
	0C85308A	Owner's Manual (English/German/French)	1
	0D06154A	Owner's Manual (Japanese)	1

## 2. REMOVAL PROCEDURES

### 2.1. Top Cover Ass'y

Refer to Fig. 2.1.

- (1) Loosen screws F01 (5 pcs.) and remove F02 (Top Cover Ass'y).

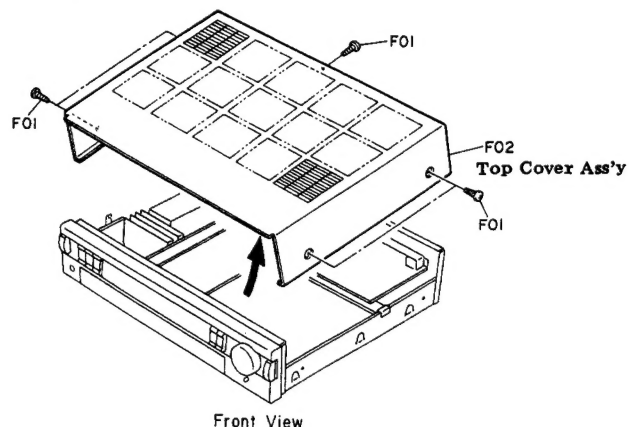


Fig. 2.1

### 2.2. Bottom Cover Ass'y

Refer to Fig. 2.2.

- (1) Loosen screws F01 (9 pcs.) and F02 (1 pce.) and remove F03 (Bottom Cover Ass'y).

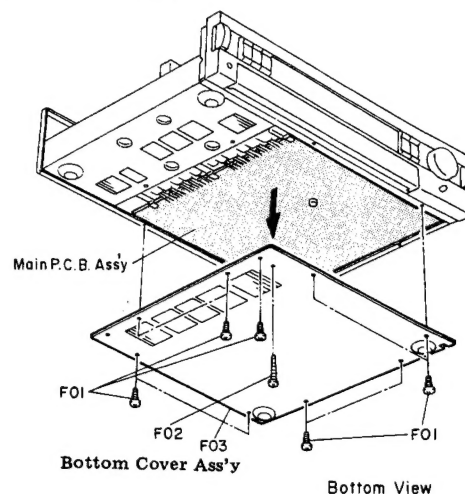


Fig. 2.2

### 2.3. Sealing Panel

Refer to Fig. 2.3.

- (1) Loosen screws F01 (2 pcs.) and remove F02 (Sealing Panel).

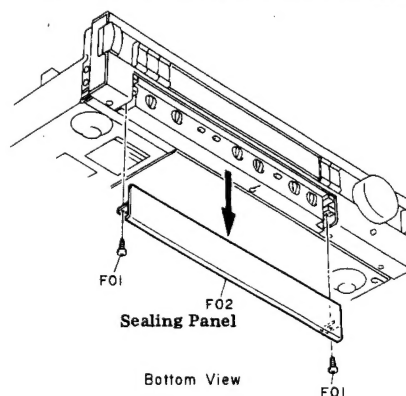


Fig. 2.3



#### 2.4. Front Panel Ass'y

Refer to Fig. 2.4.

- (1) Remove the Top Cover Ass'y referring to item 2.1.
- (2) Loosen screws F01 (3 pcs.) and F02 (3 pcs.) and remove F03 (Front Panel Ass'y).

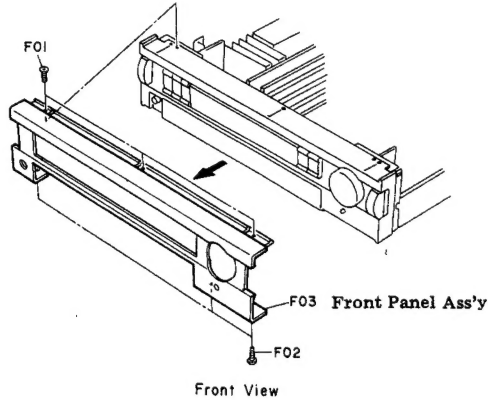


Fig. 2.4

#### 2.5. Front Chassis Ass'y

Refer to Fig. 2.5.

- (1) Remove the Front Panel Ass'y referring to item 2.4.
- (2) Disconnect the connector CN-5 from the Main P.C.B. Ass'y and pull out F01 (Volume Knob Ass'y).
- (3) Loosen screws F02 (4 pcs.), F03 (3 pcs.) and F04 (1 pce.).
- (4) Disconnect all connectors (11 pcs.) and remove F05 (Front Chassis Ass'y).

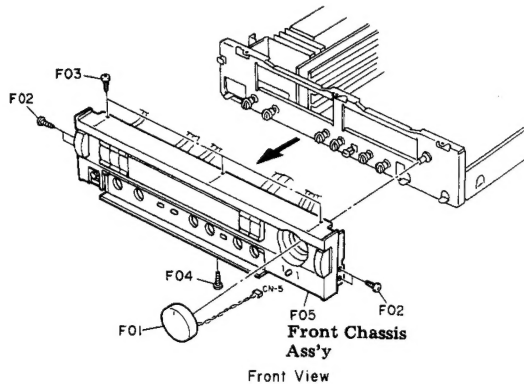


Fig. 2.5

#### 2.6. Display & Control P.C.B. Ass'y and Audio Mute P.C.B. Ass'y

Refer to Fig. 2.6.

- (1) Remove the Front Chassis Ass'y referring to item 2.5.
- (2) Loosen screws F01 (8 pcs.) and F02 (1 pce.), and remove F03 (Display & Control P.C.B. Ass'y) and F04 (Audio Mute P.C.B. Ass'y).

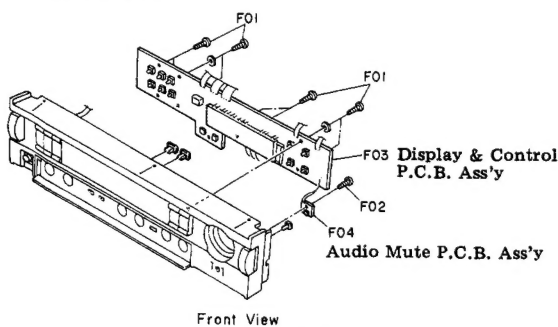


Fig. 2.6

#### 2.7. System Remote P.C.B. Ass'y

Refer to Fig. 2.7.

- (1) Remove the Top Cover Ass'y referring to item 2.1.
- (2) Loosen screws F01 (2 pcs.) and F02 (3 pcs.), and remove F03 (System Remote P.C.B. Ass'y) in the direction of the arrow.

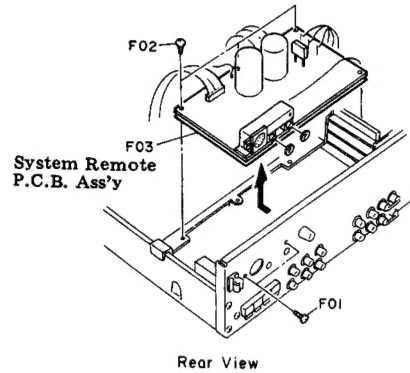


Fig. 2.7

#### 2.8. Power Supply P.C.B. Ass'y

Refer to Fig. 2.8.

- (1) Remove the Top Cover Ass'y referring to item 2.1.
- (2) Loosen a screw F01 and remove F02 (Power Supply P.C.B. Ass'y).

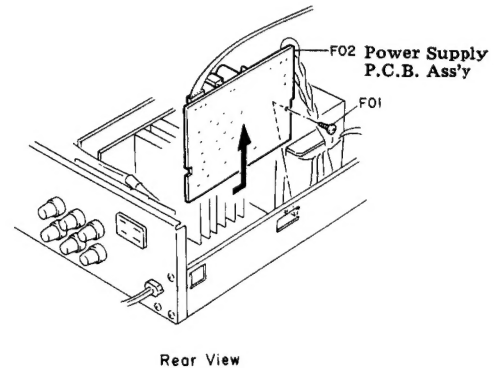


Fig. 2.8

### 3. PARTS LOCATION FOR ELECTRICAL ADJUSTMENT

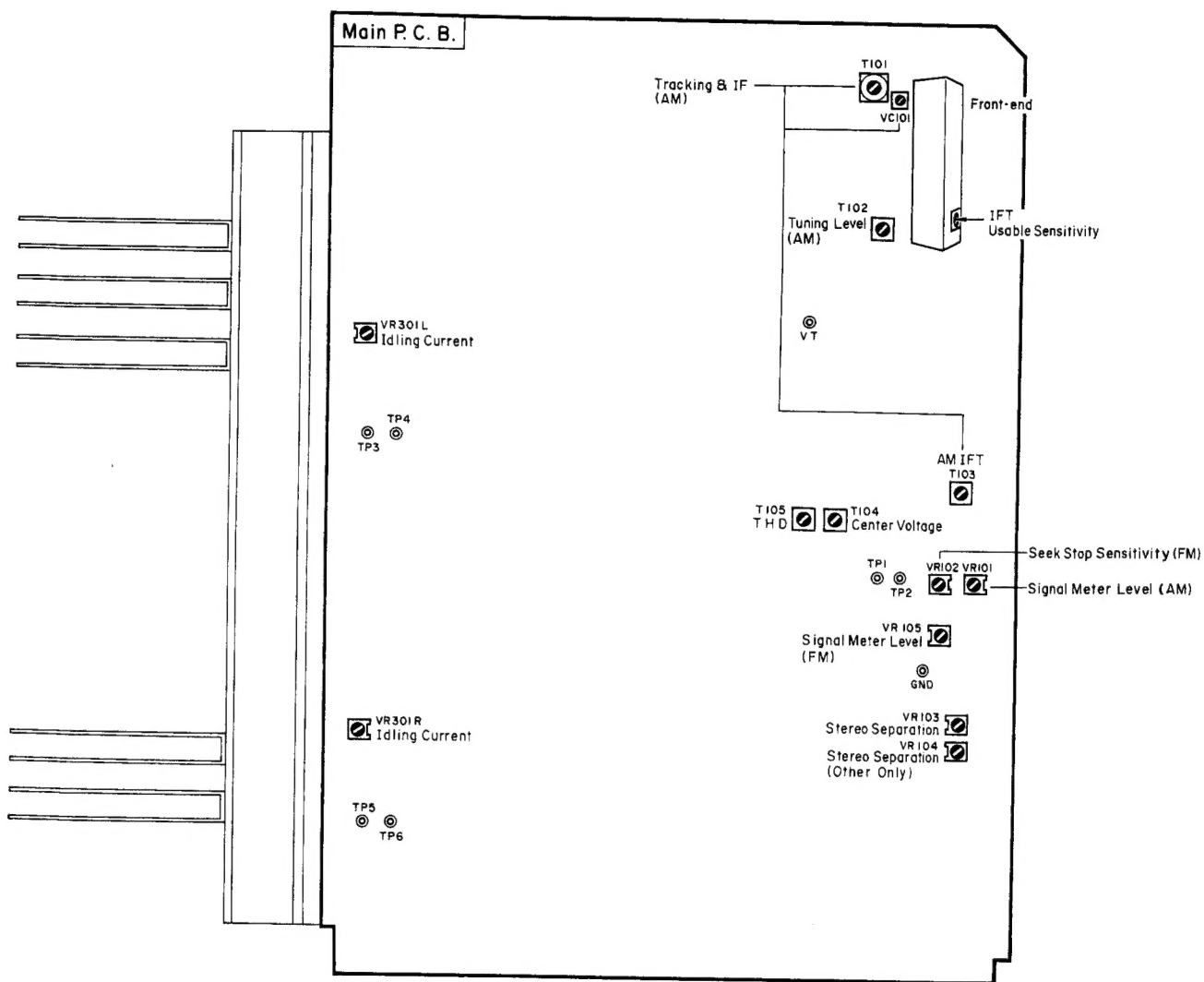


Fig. 3

### 4. ELECTRICAL ADJUSTMENTS

#### 4.1. Power Amplifier Section

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
1	Idling Current	None	DC Volt-meter between TP3,4 (L) and TP5,6 (R) on Main P.C.B.	Listen Monitor Selector - CD Volume - Min. Speaker Selector - OFF	Main P.C.B. VR301L VR301R	<ol style="list-style-type: none"> <li>1. Insert shorting plugs into the CD Player Input Jacks.</li> <li>2. Turn ON the power and allow 3 minutes before adjustment. (Top Cover must be installed in this period of time.)</li> <li>3. Adjust VR301L (VR301R) to obtain <math>4 \text{ mV} \pm 1 \text{ mV}</math> on the DC voltmeter.</li> </ol>

#### 4.2. Tuner Section

Note: Adjustment should be made in a shielded room in principle.

##### (1) FM Tuner Section

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
1	Preliminary Step	See Fig. 4.1	Receiver 2 Listen Monitor Selector - Tuner Band Selector - FM Rec.Out Selector - Tuner  Signal Generator Freq. - 98.1 MHz - 83 MHz (Japan) RF Level - 65 dBf Modulation - See REMARKS		1. Set the Receiver 2 as indicated in the MODE. 2. Adjustment and confirmation should be made after tuning in to the set carrier frequency of the Signal Generator.  Note: Contents of modulation 1. For U.S.A., Canada, Other (Wide) & Japan o Stereo Audio: 1 kHz, 91% Pilot: 19 kHz, 9% o Mono Audio: 1 kHz, 100% 2. For Australia, Europe & Other (Narrow) o Stereo Audio: 1 kHz, 51% Pilot: 19 kHz, 9% o Mono Audio: 1 kHz, 60%
2	Usable Sensitivity Adjustment	Distortion Meter to Tape Record Output Jacks	Receiver 2 Same as above  Signal Generator Freq. - 98.1 MHz - 83 MHz (Japan) RF Level - 13.5 dBf Modulation - Mono	Main P.C.B. Front-end IFT	1. Set the Receiver 2 to Manual mode by pressing the Tuning Mode button. 2. Adjust the IFT to obtain minimum distortion (total harmonic distortion (THD): 3% or less). 3. Set the frequency of the Signal Generator to 90.1 MHz/106.1 MHz and check that the THD is 3% or less.
3	Center Voltage and THD Adjustment	DC Voltmeter between TP1 & TP2 on Main P.C.B. and Distortion Meter to Tape Record Output Jacks	Receiver 2 Same as above  Signal Generator Freq. - 98.1 MHz - 83 MHz (Japan) RF Level - 65 dBf Modulation - Mono	Main P.C.B. T104 T105	1. Set the Receiver 2 to Manual mode. 2. Adjust T104 so that the reading on the DC voltmeter is 0 V $\pm$ 20 mV. 3. Adjust T105 to obtain minimum distortion (THD: 0.08% or less). Repeat 2 and 3, if necessary.
4	Seek Stop Sensitivity Adjustment	Oscilloscope to Tape Record Output Jacks	Receiver 2 Same as above  Signal Generator Freq. - 98.1 MHz - 83 MHz (Japan) RF Level - 30 dBf Modulation - Stereo	Main P.C.B. VR102	1. Set the Receiver 2 to Auto mode. 2. Rotate VR102 fully counterclockwise. Then, return it clockwise gradually until a waveform appears on the oscilloscope. 3. Decrease the RF level of the Signal Generator until the waveform on the oscilloscope disappears. Then increase the RF level gradually until a waveform appears again. At this point, check that the RF level of the Signal Generator is 30 dBf $\pm$ 6 dB.

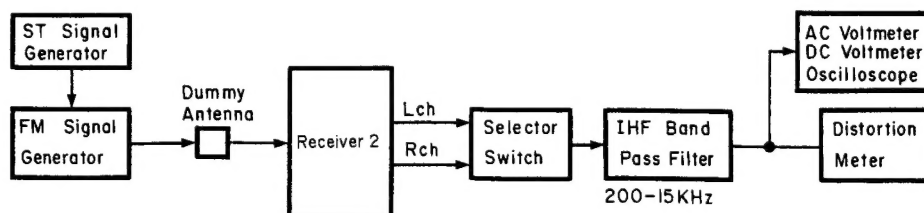


Fig. 4.1 FM Measuring Connecting Diagram

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUST- MENT	REMARKS
5	Signal Meter Level Adjustment	None	Receiver 2 Same as above  Signal Generator Freq. - 98.1 MHz - 83 MHz (Japan) RF Level - 52 dBf Modulation - Stereo	Main P.C.B. VR105	<ol style="list-style-type: none"> <li>1. Set the Receiver 2 to Auto mode.</li> <li>2. Adjust VR105 so that all segments (1 - 5) of the signal level indicator light up.</li> <li>3. Decrease the RF level of the Signal Generator to distinguish the segment 5. Next, increase it gradually so that the segment 5 starts illuminating. At this point, check that the RF level of the Signal Generator is 52 dBf <math>\pm 5</math>dB.</li> </ol>
6	Stereo Separation Adjustment	AC Voltmeter to Tape Record Output Jacks	Receiver 2 Same as above  Signal Generator Freq. - 98.1 MHz - 83 MHz (Japan) RF Level - 65 dBf Modulation - L or R only	Main P.C.B. VR103  VR104 (Other only)	<p>For U.S.A., Canada, Europe, Australia &amp; Japan versions:</p> <ol style="list-style-type: none"> <li>1. Set the Receiver 2 to Auto mode.</li> <li>2. Apply modulation to only L channel.</li> <li>3. Adjust VR103 to obtain minimum reading on the AC voltmeter at the R channel output jack.</li> <li>4. Apply modulation to only R channel.</li> <li>5. Check that the reading on the AC voltmeter at the L channel output jack is within <math>\pm 1</math> dB with respect to the reading in 3. If not, repeat 2 through 4.</li> </ol> <p>For Other version:</p> <ol style="list-style-type: none"> <li>1. Set the switches on the rear panel as follows: Freq. Step FM/AM - 100 kHz/10 kHz IF Band - Wide</li> <li>2. Apply the same procedures as above.</li> <li>3. Set the switches as follows: Freq. step FM/AM - 50 kHz/9 kHz IF Band - Narrow</li> <li>4. Apply the same procedures as mentioned above. However, adjust VR104 instead of VR103.</li> </ol>

(2) AM Tuner Section

Note: Frequencies for Australia, Europe and Other (Narrow) are indicated in parentheses.

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
1	Tuning Level Adjustment	DC Voltmeter between TP (VT) and TP (GND) on Main P.C.B.	Receiver 2 Listen Monitor Selector - Tuner Band Selector - AM Rec.out selector - Tuner  Signal Generator Freq. - 520 (522) kHz/ 1710 (1611) kHz Modulation - 400 Hz 30%	Main P.C.B. T102	1. Set the frequency of the Signal Generator to 520 kHz (522 kHz) and make tuning. 2. Adjust T102 to obtain 2.4 V $\pm$ 0.1V on the DC voltmeter. 3. Change the frequency to 1710 kHz (1611 kHz) and make tuning. Check whether the DC voltmeter reads 15 V to 16 V.
2	Tracking and IF Adjustment	AC Voltmeter to Tape Record Output Jacks	Receiver 2 Same as above  Signal Generator Freq. - 600 (603) kHz/ 1400 (1404) kHz RF Level - 82 dB $\mu$ Modulation - 400 Hz 30%	Main P.C.B. T101 T103 VC101	1. Set the measurement instruments as shown in Fig. 4.2. Set the distance between the AM Loop Antenna of the Receiver 2 and a test loop to 60 cm. To obtain 56 dB $\mu$ /m at the AM Loop Antenna, set the RF level output of the AM Signal Generator to 82 dB $\mu$ as loss is 26 dB in this setting. 2. Set the frequency of the Signal Generator to 600 kHz (603 kHz) and make tuning. 3. Adjust T101 to obtain maximum reading on the AC voltmeter. 4. Adjust T103 to obtain maximum reading on the AC voltmeter. 5. Set the frequency to 1400 kHz (1404 kHz) and make tuning. 6. Adjust VC101 to obtain maximum reading on the AC voltmeter. 7. Repeat 2 through 6 once.
3	Signal Meter Level Adjustment	None	Receiver 2 Same as above  Signal Generator Freq. - 1000 (999) kHz RF Level - 100 dB $\mu$ Modulation - 400 Hz 30%	Main P.C.B. VR101	1. With the same setting as in Step 2, set the RF level output of the AM Signal Generator to 100 dB $\mu$ in order to obtain 80 dB $\mu$ /m at the AM Loop Antenna. 2. Adjust VR101 so that the segment 5 of the signal level indicator starts illuminating. Note: Before adjustment, select AM mode and wait for more than three minutes.

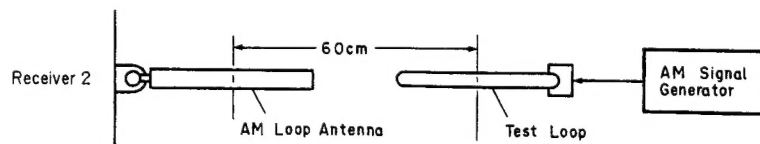


Fig. 4.2 AM Measuring Diagram

## 5. MECHANISM ASS'Y AND PARTS LIST

### 5.1. Synthesis

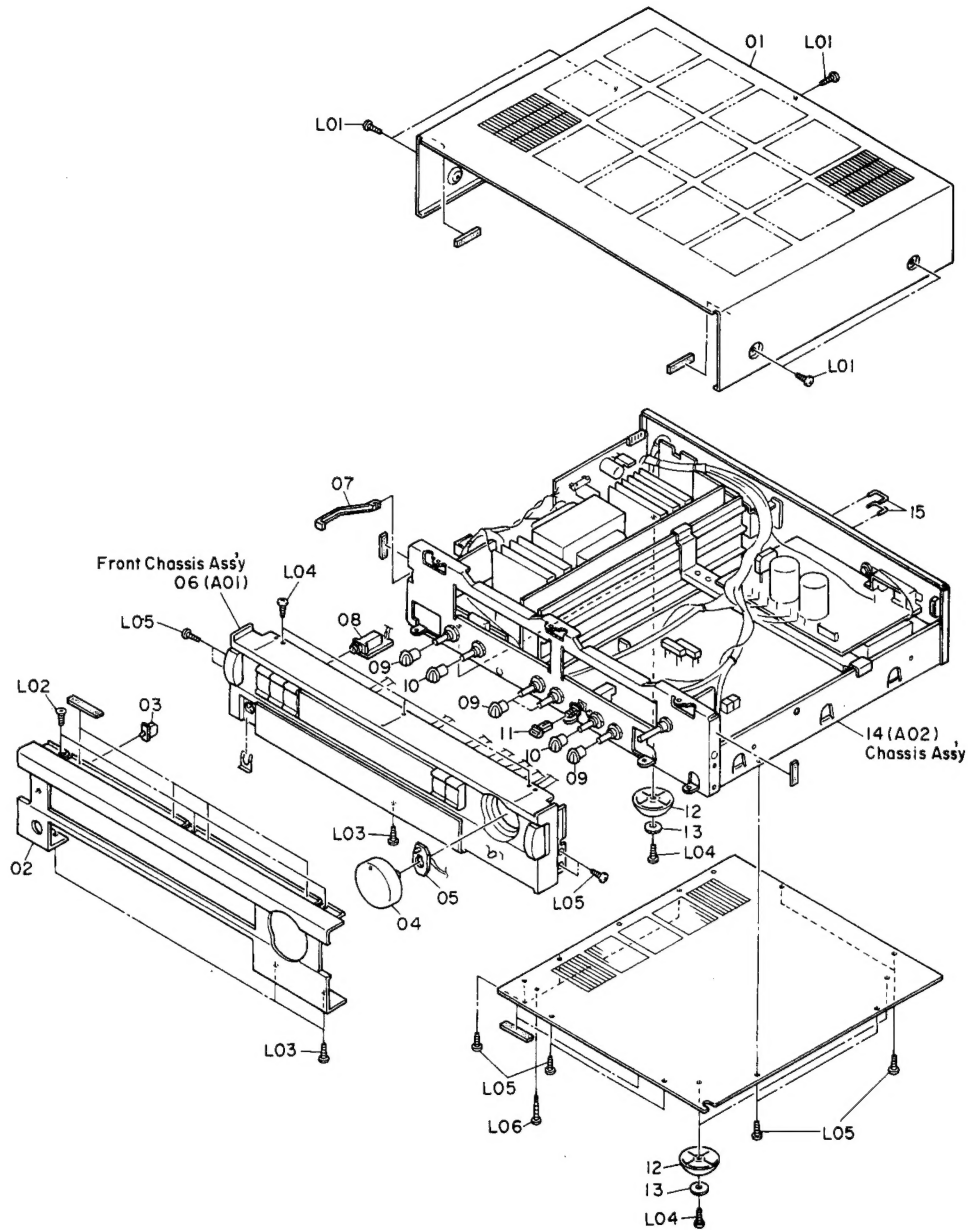


Fig. 5.1

\*: Unstocked parts.

Schematic Ref. No.	Part No.	Description	Qty	Schematic Ref. No.	Part No.	Description	Qty
<b>5.1. Synthesis</b>				12	OC85356A	Leg	4
				13	OC85358A	Leg Felt Sheet (USA, CAN, EP, UK, AUS, OTR)	4
					0H05993A	Leg Felt Sheet (JPN)	4
				14	—	Chassis Ass'y	1
				15	0J05710A	Shorting Pin	2
01	OC85459A	Top Cover	1	L01	0E03433A	BT3x6 ⊕ Binding Projected (Black Chromate)	
02	OC85463A	Front Panel	1	L02	0E03495A	BT3x10 ⊕ Countersunk (Black Chromate)	
03	OC85342A	LED Lens	1	L03	0E00948A	BT3x10 ⊕ Binding (Black Chromate)	
04	CA81683A	Volume Knob Ass'y	1	L04	0E00868A	BT3x8 ⊕ Binding	
05	* CA81715A	Volume LED P.C.B. Ass'y (USA, CAN, EP, UK, AUS, OTR)	1	L05	0E00857A	BT3x6 ⊕ Binding	
		Volume LED P.C.B. Ass'y (JPN)	1	L06	OC85577A	BT3x16 ⊕ Binding (Tapping)	
06	* BA08179A	Front Chassis Ass'y	1				
07	OC85357A	Power Switch Joint	1				
08	* CA81719A	Headphone P.C.B. Ass'y (USA, CAN, EP, UK, AUS, OTR)	1				
		Headphone P.C.B. Ass'y (JPN)	1				
09	* BA08183A	Headphone P.C.B. Ass'y (JPN)	1				
10	OC85460A	Tone Knob DG	4				
11	OC85461A	Tone Knob LG	2				
	OC85465A	Push Switch Knob DG	1				

## 5.2. Front Chassis Ass'y (A01)

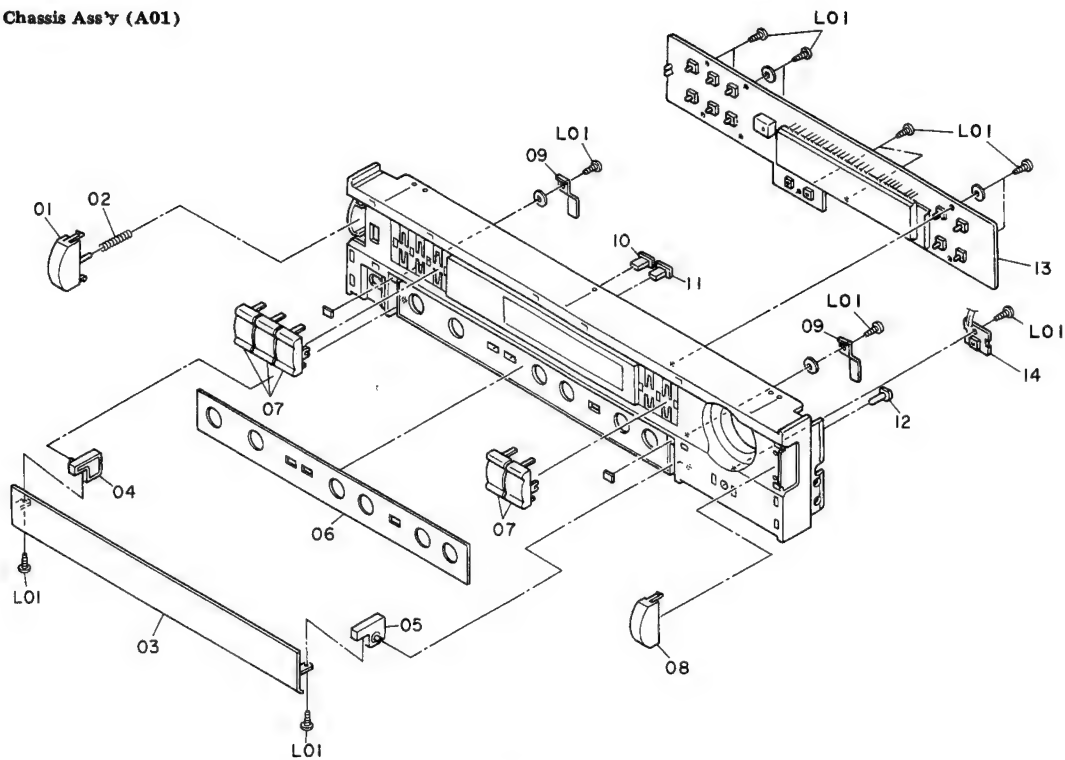


Fig. 5.2

★: Unstocked parts.

Schematic Ref. No.	Part No.	Description	Qty
<b>5.2. Front Chassis Ass'y (A01)</b>			
<b>A01</b>	<b>—</b>	<b>Front Chassis Ass'y</b>	<b>1</b>
01	0C85345A	Power Switch Knob	1
02	0C85347A	Power Switch Spring	1
03	0C85489A	Sealing Panel	1
04	0C85491A	Hinge L	1
05	0C85492A	Hinge R	1
06	0C86092A	Indication Panel	1
07	0C85390A	Control Knob	5
08	0C85389A	Dummy Cap	1
09	0C85490A	Door Spring	2
10	0C85467A	Tact Switch Knob DG	1
11	0C85469A	Tact Switch Knob LG	1
12	0C85468A	Mute Knob	1
13	★ CA81712A	Display & Control P.C.B. Ass'y (USA, CAN)	1
	★ CA81742A	Display & Control P.C.B. Ass'y (EP, UK)	1
	★ CA81805A	Display & Control P.C.B. Ass'y (AUS)	1
	★ CA81806A	Display & Control P.C.B. Ass'y (OTR)	1
	★ BA08176A	Display & Control P.C.B. Ass'y (JPN)	1
14	★ CA81713A	Audio Mute P.C.B. Ass'y (USA, CAN, EP, UK, AUS, OTR)	1
	★ BA08177A	Audio Mute P.C.B. Ass'y (JPN)	1
L01	0C85416A	PT 3x8 ⊕ Binding	

### 5.3. Chassis Assy (A02)

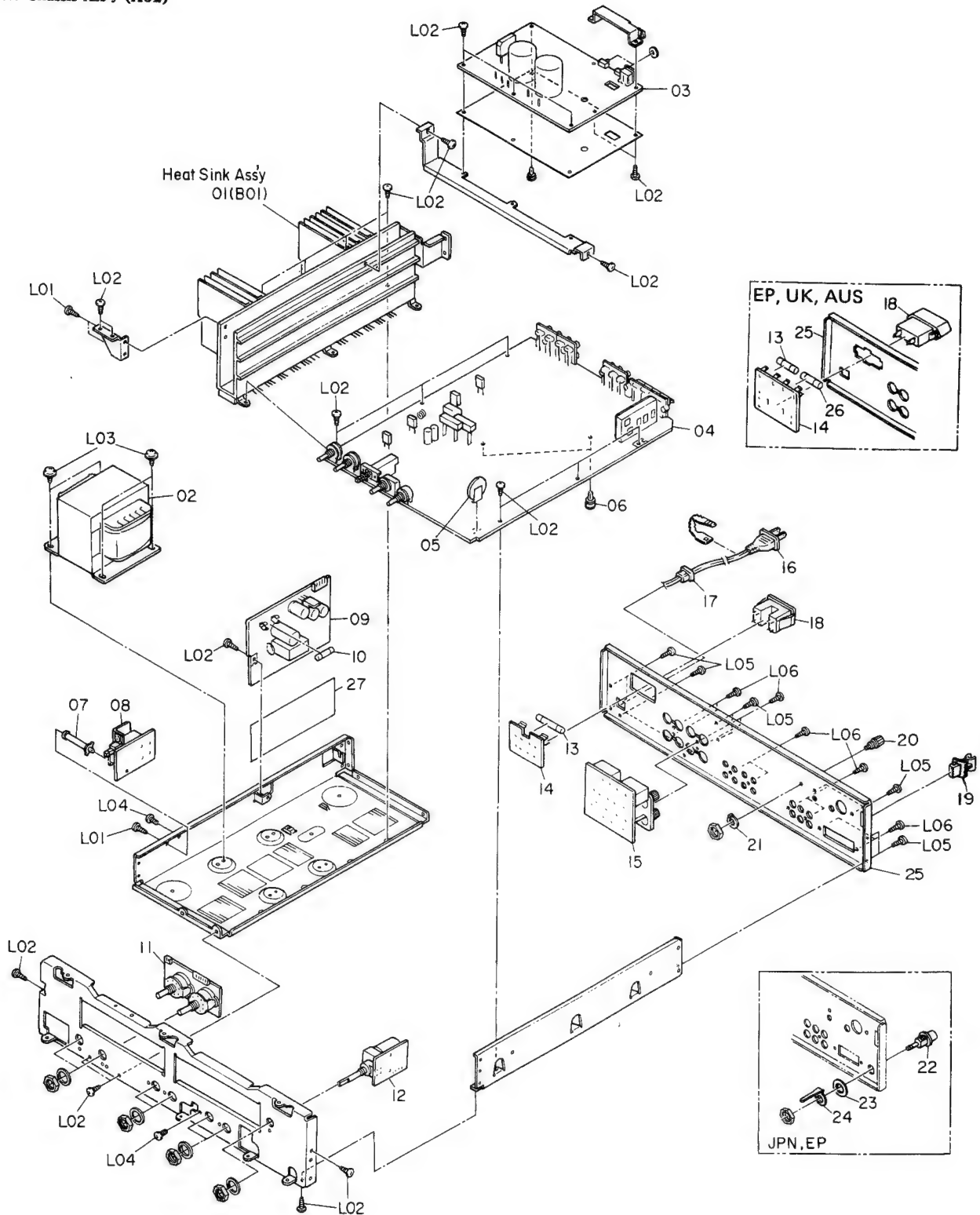


Fig. 5.3



★: Unstocked parts.

Schematic Ref. No.	Part No.	Description	Qty	Schematic Ref. No.	Part No.	Description	Qty
<b>5.3. Chassis Ass'y (A02)</b>				<b>5.4. Heat Sink Ass'y (B01)</b>			
A02	—	Chassis Ass'y	1	B01	—	Heat Sink Ass'y	1
01	—	Heat Sink Ass'y	1	01	OB10199A	TR 2SC3421 [Q306L/R]	2
02	OC85476A	Power Transformer (USA, CAN)	1	02	OB19607A	Thermister 50KD-5 [TH301]	1
	OC85595A	Power Transformer (EP, UK, AUS)	1	03	OJ05615A	TH Holder	1
	OC85596A	Power Transformer (OTR)	1	04	OB10288A	TR 2SD1407 [Q307L/R]	2
	OC85549A	Power Transformer (JPN)	1	05	OB10289A	TR 2SB1016 [Q308L/R]	2
03	★ CA81721A	System Remote P.C.B. Ass'y (USA, CAN, OTR)	1	06	OJ05671A	Insulator TO-3P	4
★	CA81810A	System Remote P.C.B. Ass'y (EP, UK, AUS)	1	07	OB10250A	TR 2SC3856 [Q309L/R]	2
★	BA08185A	System Remote P.C.B. Ass'y (JPN)	1	08	OB10251A	TR 2SA1492 [Q310L/R]	2
04	★ CA81705A	Main P.C.B. Ass'y (USA, CAN)	1	L01	OE00868A	BT3x8 @ Binding	2
★	CA81741A	Main P.C.B. Ass'y (EP)	1	L02	OE00986A	M3x10 @ Binding	
★	CA81802A	Main P.C.B. Ass'y (UK)	1	L03	OE00994A	M3x12 @ Binding	
★	CA81803A	Main P.C.B. Ass'y (AUS)	1				
★	CA81804A	Main P.C.B. Ass'y (OTR)	1				
★	BA08175A	Main P.C.B. Ass'y (JPN)	1				
05	OB90200B	Lithium Battery UM-34	1				
06	OC85851A	P.C.B. Support 6mm	2				
07	OC85861A	P.C.B. Support 25mm	1				
08	★ CA81720A	Power Switch P.C.B. Ass'y (USA, CAN, EP, UK, AUS, OTR)	1				
★	BA08184A	Power Switch P.C.B. Ass'y (JPN)	1				
09	★ CA81716A	Power Supply P.C.B. Ass'y (USA, CAN)	1				
★	CA81743A	Power Supply P.C.B. Ass'y (EP, UK, AUS)	1				
★	CA81838A	Power Supply P.C.B. Ass'y (OTR)	1				
★	BA08180A	Power Supply P.C.B. Ass'y (JPN)	1				
10	OB90329A	Fuse T1A 125V [F401]	1				
	OB90289A	Fuse T1A 250V [F401] (EP, UK, AUS)	1				
	OB90373A	Fuse 1A 250V [F401] (JPN)	1				
11	★ CA81714A	Selector P.C.B. Ass'y (USA, CAN, EP, UK, AUS, OTR)	1				
★	BA08178A	Selector P.C.B. Ass'y (JPN)	1				
12	★ CA81722A	Motor Volume P.C.B. Ass'y (USA, CAN, EP, UK, AUS, OTR)	1				
★	BA08186A	Motor Volume P.C.B. Ass'y (JPN)	1				
13	OB90346A	Fuse T4A 250V [F402]	1				
	OB90349A	Fuse T2A 250V [F402] (EP, UK, AUS)	1				
	OB90521A	Fuse 4A 250V [F402] (JPN)	1				
14	★ CA81718A	AC Outlet P.C.B. Ass'y (USA, CAN)	1				
★	CA81745A	AC Outlet P.C.B. Ass'y (EP, UK)	1				
★	CA81808A	AC Outlet P.C.B. Ass'y (AUS)	1				
★	CA81809A	AC Outlet P.C.B. Ass'y (OTR)	1				
★	BA08182A	AC Outlet P.C.B. Ass'y (JPN)	1				
15	★ CA81717A	Speaker Terminal P.C.B. Ass'y (USA, CAN, OTR)	1				
★	CA81744A	Speaker Terminal P.C.B. Ass'y (EP)	1				
★	CA81807A	Speaker Terminal P.C.B. Ass'y (UK, AUS)	1				
★	BA08181A	Speaker Terminal P.C.B. Ass'y (JPN)	1				
16	OB80199A	AC Power Cord (USA, CAN)	1				
	OB8093U	AC Power Cord (EP)	1				
	OC85878A	AC Power Cord (UK)	1				
	OB80148A	AC Power Cord (AUS)	1				
	OC85877A	AC Power Cord (OTR)	1				
	OB90274A	AC Power Cord (JPN)	1				
17	OB90280A	Cord Bushing	1				
18	OB81928A	AC Outlet (USA, CAN, OTR)	1				
	OB81987A	AC Outlet (EP)	1				
	OC85876A	AC Outlet (UK)	1				
	OB81988A	AC Outlet (AUS)	1				
	OB81986A	AC Outlet (JPN)	1				
19	OB90316A	Antenna Holder	1				
20	JA04383A	Ground Terminal Ass'y	1				
21	OJ05703A	Lug Terminal	1				
22	OC09584A	Antenna Terminal F (JPN)	1				
	OB81979A	Antenna Terminal (EP, UK)	1				
23	OC85445A	Ground Washer 10mm (EP, UK, JPN)	1				
24	OC85442A	Lug Terminal (EP, UK, JPN)	1				
25	OC85466A	Rear Panel (USA, CAN)	1				
	OC85597A	Rear Panel (EP)	1				
	OC85874A	Rear Panel (UK)	1				
	OC85875A	Rear Panel (AUS)	1				
	OC85598A	Rear Panel (OTR)	1				
	OH05983A	Rear Panel (JPN)	1				
26	OB90350A	Fuse T2.5A 250V [F403] (EP, UK, AUS)	1				
27	OC85599A	Insulator (EP, UK, AUS)	1				
—	CA81834A	IFS/DU Switch P.C.B. Ass'y (OTR)	1				
—	OC85600A	Voltage Selector (OTR)	1				
L01	OE00868A	BT3x8 @ Binding					
L02	OE00857A	BT3x6 @ Binding					
L03	OC85421A	ST4x6 @ Binding					
L04	OE00896A	M3x6 @ Binding					
L05	OE00860A	BT3x6 @ Binding (Black Chromate)					
L06	OE00948A	BT3x10 @ Binding (Black Chromate)					
	OE00985A	M3x6 @ Binding (Black Chromate) (OTR)					
	OE03072A	M2.6x6 @ Binding (Black Chromate) (OTR)					

5.4. Heat Sink Ass'y (B01)

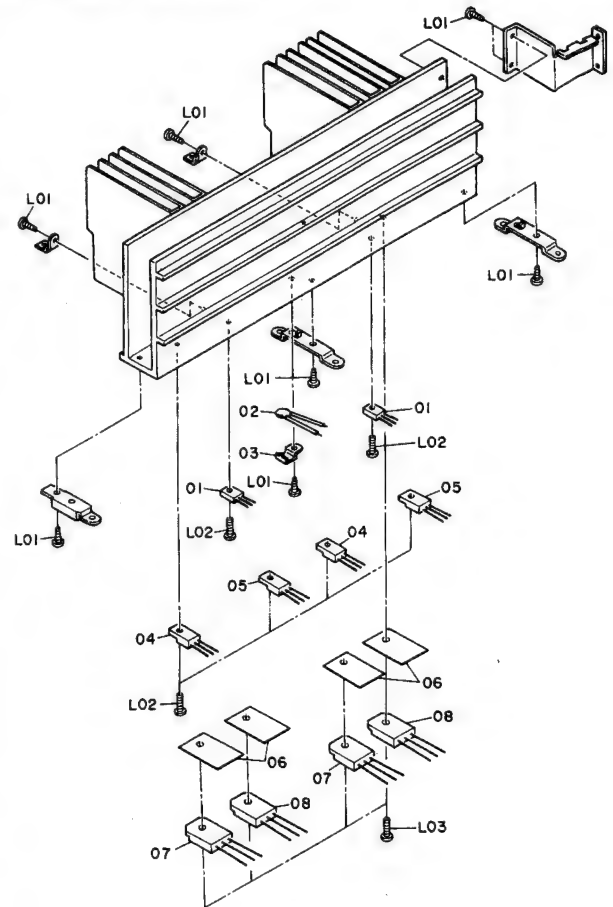


Fig. 5.4

## 6. MOUNTING DIAGRAMS AND PARTS LIST

- Notes: 1. Mounting diagram shows a dip side view of the printed circuit board.  
 2. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.  
 3. Following transistors are interchangeable with each other.  
 a. 2SA733, 2SA608SP, 2SA1048, 2SA1175  
 b. 2SC945, 2SC536SP, 2SC2458, 2SC2785  
 4. Abbreviation for part name:  
 TR — Transistor, SiD — Silicon Diode, ZD — Zener Diode, Varicap — Variable Capacitance Diode  
 RK — Carbon Resistor, RM — Metal Film Resistor, RF — Fail Safe Type Resistor, RC — Cement Resistor  
 CE — Electrolytic Capacitor, CML — Mylar Capacitor, CC — Ceramic Capacitor, CPP — PP Capacitor,  
 CMM — Metalized Mylar Capacitor, CSP — Polystyrene Capacitor, C — Mica Capacitor  
 CT — Tantalum Capacitor

### 6.1. AC Outlet P.C.B. Ass'y

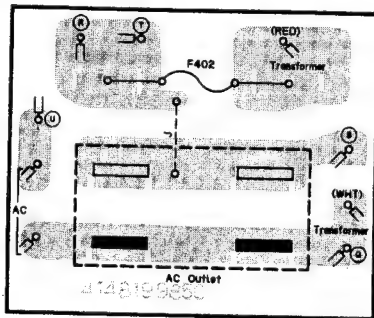


Fig. 6.1.1 USA, CAN, OTR, JPN

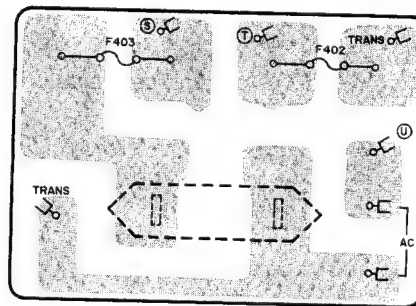


Fig. 6.1.2 EP, UK

### 6.2. Power Switch P.C.B. Ass'y

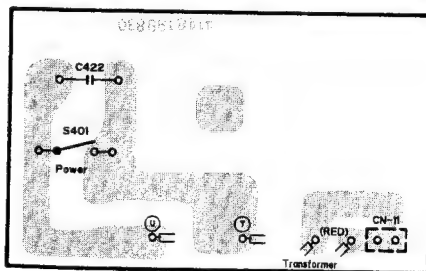


Fig. 6.2

### 6.3. Volume LED P.C.B. Ass'y



Fig. 6.3

### 6.4. Audio Mute P.C.B. Ass'y

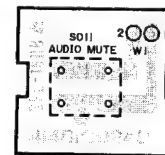


Fig. 6.4

\*: Unstocked parts.

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
6.1. AC Outlet P.C.B. Ass'y			6.2. Power Switch P.C.B. Ass'y			6.3. Volume LED P.C.B. Ass'y		
*	CA81718A	AC Outlet P.C.B. Ass'y (USA, CAN)	C422	*	CA81720A	ED125	*	CA81715A
*	CA81809A	AC Outlet P.C.B. Ass'y (OTR)		*	BA08184A		*	BA08179A
*	BA08182A	AC Outlet P.C.B. Ass'y (JPN)			OC85496A			OC85494A
	OC85498A	AC Outlet P.C.B. Fuse Holder (2)			OB41825A			OC85387A
*	CA81745A	AC Outlet P.C.B. Ass'y (EP, UK)	S401 CN11		OB41826A	CN5		OB12710A
	OC85880A	AC Outlet P.C.B. Fuse Holder (4)			OB71011A			OC85405A
	OB81848A				OB81666A			
					OC85360A			
*	CA81808A	AC Outlet P.C.B. Ass'y (AUS)				6.4. Audio Mute P.C.B. Ass'y		
	OC85879A	AC Outlet P.C.B. Fuse Holder (4)				S011 W-1	*	CA81713A
	OB81848A						*	BA08177A
								OC85495A
								OB70130A
								OC85497A
								Audio Mute P.C.B. Tact Switch (1) Ribbon Wire 2P (1)

### 6.5. Headphone P.C.B. Ass'y

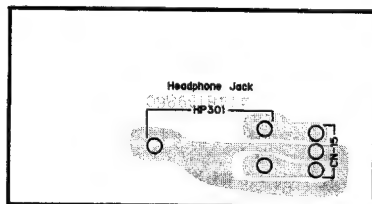


Fig. 6.5

### 6.6. Motor Volume P.C.B. Ass'y

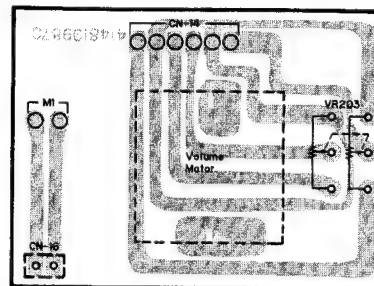


Fig. 6.6

### 6.7. Selector P.C.B. Ass'y

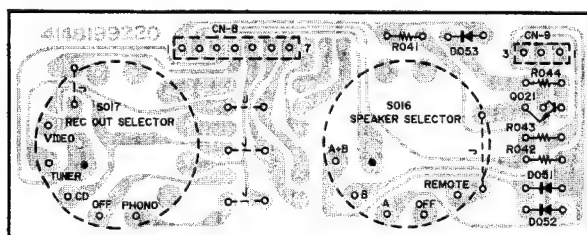


Fig. 6.7

### 6.8. Speaker Terminal P.C.B. Ass'y

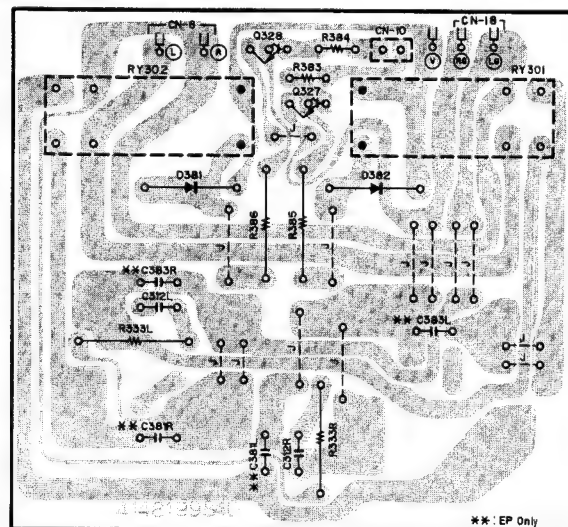


Fig. 6.8

\*: Unstocked parts.

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
6.5. Headphone P.C.B. Ass'y			6.7. Selector P.C.B. Ass'y			6.8. Speaker Terminal P.C.B. Ass'y		
HP301 CN15	★ CA81719A	Headphone P.C.B. Ass'y (USA, CAN)	Q021 D051,052 D053 R041 R042,043 R044 S016,017 CN8 CN9	★ CA81714A	Selector P.C.B. Ass'y (USA, CAN, EP, UK, AUS, OTR)	★ CA81717A	Speaker Terminal P.C.B. Ass'y (USA, CAN, OTR)	
	★ BA08183A	Headphone P.C.B. Ass'y (JPN)		★ BA08178A	Selector P.C.B. Ass'y (JPN)		★ CA81744A	Speaker Terminal P.C.B. Ass'y (EP)
	0C85502A 0B81757A 0C85503A	Headphone P.C.B. Headphone Jack 3P Connector Ass'y		0C85538A 0B06100A 0B06398A 0B06398A 0B09725A 0B09701A 0B09701A 0B70141A 0B81671A 0B81667A	Selector P.C.B. TR 2SC945 SID 1SS176 SID 1SS176 RK 100K 1/6W J RK 10K 1/6W J RK 10K 1/6W J Rotary Switch 7P S-Post 3P S-Post		★ CA81807A	Speaker Terminal P.C.B. Ass'y (UK, AUS)
	6.6. Motor Volume P.C.B. Ass'y			7P S-Post 3P S-Post			★ BA08181A	Speaker Terminal P.C.B. Ass'y (JPN)
VR203 CN14 CN16 W-2	★ CA81722A	Motor Volume P.C.B. Ass'y (USA, CAN)				Q327,328 D381,382 R333L,R R383,384 R385,386 C312L,R C381L,R C383L,R RY301,302 CN6 CN10	0C85548A	Speaker Terminal P.C.B.
	★ BA08186A	Motor Volume P.C.B. Ass'y (JPN)					0B06142A 0B12586A 0B24181A 0B09701A 0B24253A 0B05796A 0B05681A	TR 2SC2240 (BL) SID 1N4002L RF 10 1W J RK 10K 1/6W J RF 820 2W CML 0.047μ 50V J CML 0.01μ 50V J (EP)
	0C85504A 0C85505A 0C85506A 0B81666A 0C85507A	Motor Volume P.C.B. VR 50KBx2 6P Connector Ass'y 2P S-Post Ribbon Wire 2P					0B05681A	CML 0.01μ 50V J (EP)
							0B05681A	CML 0.01μ 50V J (EP)
							0B90331A 0C85546A 0B81666A 0C85545A	Relay VB-24MBU 4P Connector Ass'y 400mm 2P S-Post 8P Speaker Terminal (1)

# 6.9. Power Supply P.C.B. Ass'y

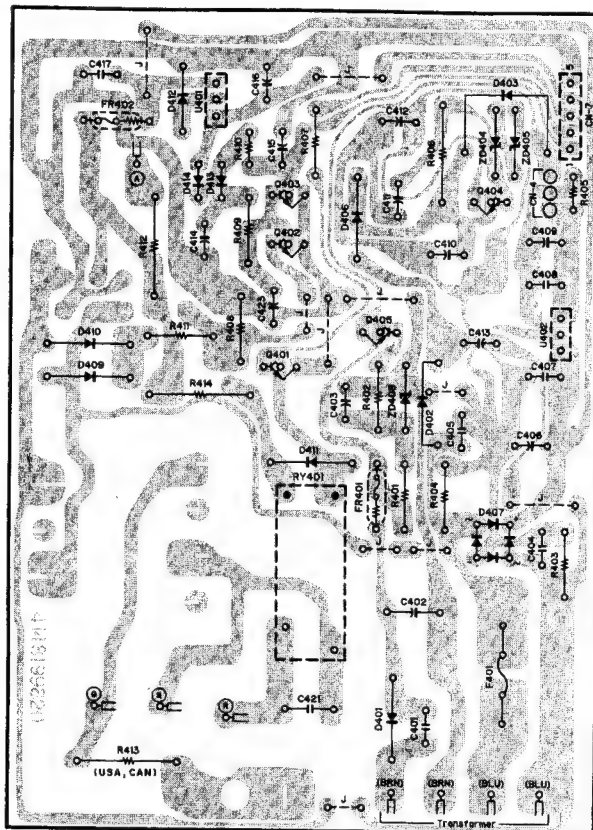


Fig. 6.9

\*: Unstocked parts.

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
<b>6.9. Power Supply P.C.B. Ass'y</b>			R413	OB05919A	RK 3.3M 1/2W (USA, CAN)
	* CA81716A	Power Supply P.C.B. Ass'y (USA, CAN)	R414	OB24359A	RF 120 1W J
	* CA81743A	Power Supply P.C.B. Ass'y (EP, UK, AUS)	RY401	OB90334A	Relay VS-12MB-VD3
	* CA81838A	Power Supply P.C.B. Ass'y (OTR)	C401	OB09387A	CC 0.047μ 50V Z
	* BA08180A	Power Supply P.C.B. Ass'y (JPN)	C402	OB40124A	CE 1000μ 50V
			C403	OB09313A	CE 100μ 50V
			C404,405	OB09292A	CC 0.1μ 50V Z
			C406	OB40095A	CE 1000μ 25V
			C407,408	OB09292A	CC 0.1μ 50V Z
			C409	OB40079A	CE 220μ 16V
	0C85544A	Power Supply P.C.B.	C410	OB40123A	CE 470μ 50V
U401	OB11010A	IC μPC7805	C411,412	OB09126A	CE 100μ 35V
U402	OB11011A	IC μPC7812	C413	OB40123A	CE 470μ 50V
Q401,402	OB06100A	TR 2SC945	C414	OB01400A	CE 100μ 16V
Q403	OB10399A	TR 2SC2001 (L)	C415	OB01674A	CE 10μ 25V
Q404	OB06100A	TR 2SC945	C416	OB40067A	CE 470μ 10V Z
Q405	OB10246A	TR 2SA965 (Y)	C417	OB09292A	CC 0.1μ 50V Z
ZD404,405	OB12104A	ZD 15V B3	C421	OB41825A	CC 4700P AC400V
ZD408	OB12255A	ZD 33V B2	C423	OB09372A	CE 2.2μ 50V
D401,402	OB12586A	SID 1N4002L	CN4	0C85542A	3P Connector Ass'y
D403	OB12586A	SID 1N4002L	CN7	OB1762A	5P T-Post
D406	OB12586A	SID 1N4002L		OB81848A	Fuse Holder (2)
D407	OB12604A	SID W02M		0J05670A	Earth Plate (1)
D409,410	OB12586A	SID 1N4002L			(USA, CAN, JPN)
D411,412	OB12586A	SID 1N4002L			
D413,414	OB06398A	SID 1SS176			
FR401	OB24023A	Fuse Resistor 1 1/4W			
R401	OB05622A	RK 2.2K 1/4W J			
R402	OB05577A	RK 330 1/4W J			
R403,404	OB01681A	RK 3.3K 1/4W J			
R405	OB09685A	RK 2.2K 1/6W J			
R406	OB20511A	RK 1K 1/2W J			
R407	OB05622A	RK 2.2K 1/4W J			
R408	OB05641A	RK 47K 1/4W J			
R409	OB01888A	RK 10K 1/4W J			
R410	OB09701A	RK 10K 1/6W J			
R411	OB01889A	RK 100K 1/4W J			
R412	OB24210A	RF 56 1W J			
<b>6.10. Display &amp; Control P.C.B. Ass'y</b>					
	* CA81712A	Display & Control P.C.B. Ass'y (USA, CAN)			
	* CA81742A	Display & Control P.C.B. Ass'y (EP, UK)			
	* CA81805A	Display & Control P.C.B. Ass'y (AUS)			
	* CA81806A	Display & Control P.C.B. Ass'y (OTR)			
	* BA08176A	Display & Control P.C.B. Ass'y (JPN)			
	0C85537A	Display & Control P.C.B.			
U001	OB11872A	IC μPD57208 CW-A77			
U002	OB11530A	IC BA6208			
U003	OB11244A	IC LB1413N			
Q001,002	OB10328A	TR DTC114TF			
Q003,004	OB10328A	TR DTC114TF			
Q005,006	OB10328A	TR DTC114TF			
Q007,008	OB10325A	TR DTA114TF			
Q009	OB10327A	TR DTA114TF			
Q010,011	OB10325A	TR DTA114TF			
Q012	OB10325A	TR DTA114TF			
Q013,014	OB10057A	TR DTA114TS			
Q015,016	OB10057A	TR DTA114TS			
Q017,018	OB10062A	TR DTC144ES			
Q019	OB10062A	TR DTC144ES			
Q020	OB06100A	TR 2SC945			
ZD024	OB06232A	ZD 9.1V RD9.1EB2			
ZD025	OB12159A	ZD 7.5V RD7.5EB2			
ED027,028	0C85387A	LED SLR-34DC3F (USA, CAN, EP, UK, AUS, OTR)			
	OB12710A	LED SLR-34MW3F (JPN)			
ED029	0C85439A	LED SLR-34PC3F (USA, CAN, EP, UK, AUS, OTR)			
	OB85387A	LED SLR-34DC3F (JPN)			
D001,002	OB06398A	SID 1SS176			
D003	OB06398A	SID 1SS176			
D004	OB12584A	SID 1N4148			
D005,006	OB06398A	SID 1SS176			
D007,008	OB06398A	SID 1SS176			
D010,011	OB06398A	SID 1SS176			
D012,013	OB06398A	SID 1SS176			
D014	OB06398A	SID 1SS176			
D016,017	OB06398A	SID 1SS176			
D018	OB06398A	SID 1SS176			
D019	OB06398A	SID 1SS176			
D020,021	OB06398A	SID 1SS176			
D022,023	OB06398A	SID 1SS176			
D026	OB06398A	SID 1SS176			
D030,031	OB06398A	SID 1SS176			
D032,033	OB06398A	SID 1SS176			
D034,035	OB06398A	SID 1SS176			
D036,037	OB06398A	SID 1SS176			
D038	OB06398A	SID 1SS176			
D039	OB06398A	SID 1SS176			
D048	OB06398A	SID 1SS176 (EP, UK, JPN)			
D049	OB06398A	SID 1SS176 (AUS, JPN)			
D054	OB06398A	SID 1SS176			
X001	OB92031A	Ceramic Resonator 419MHz			
L001	OB51291A	Choke Coil 470μ K			
RA001,002	0C85397A	R Array 100Kx9			
R003,004	OB09725A	RK 100K 1/6W J			
R005	OB09725A	RK 100K 1/6W J			
R006	OB09721A	RK 68K 1/6W J			
R007	OB09709A	RK 22K 1/6W J			
R008,009	OB09725A	RK 100K 1/6W J			
R010	OB09725A	RK 100K 1/6W J			
R011,012	OB09661A	RK 220 1/6W J			
R013,014	OB09701A	RK 10K 1/6W J			
R015	OB09661A	RK 220 1/6W J			
R016	OB09701A	RK 10K 1/6W J			
R017,018	OB09661A	RK 220 1/6W J			
R019	OB09701A	RK 10K 1/6W J			
R020,021	OB09701A	RK 10K 1/6W J			
R022,023	OB09701A	RK 10K 1/6W J			
R024,025	OB09701A	RK 10K 1/6W J			
R026	OB09701A	RK 10K 1/6W J			
R027	OB09677A	RK 1K 1/6W J			
R028	OB09723A	RK 82K 1/6W J			
R030,031	OB09701A	RK 10K 1/6W J			
R032,033	OB09701A	RK 10K 1/6W J			
R039	OB09711A	RK 27K 1/6W J			
C001	OB09291A	CC 0.022μ 50V Z			
C002	OB01405A	CE 1μ 50V			
C003,004	OB41740A	CC 33P 50V J			
C005	OB09292A	CC 0.1μ 50V Z			
C006	OB09291A	CC 0.022μ 50V Z			
C007	OB09292A	CC 0.1μ 50V Z			
C008,009	OB01412A	CE 10μ 16V			
C010	OB01403A	CE 47μ 16V			



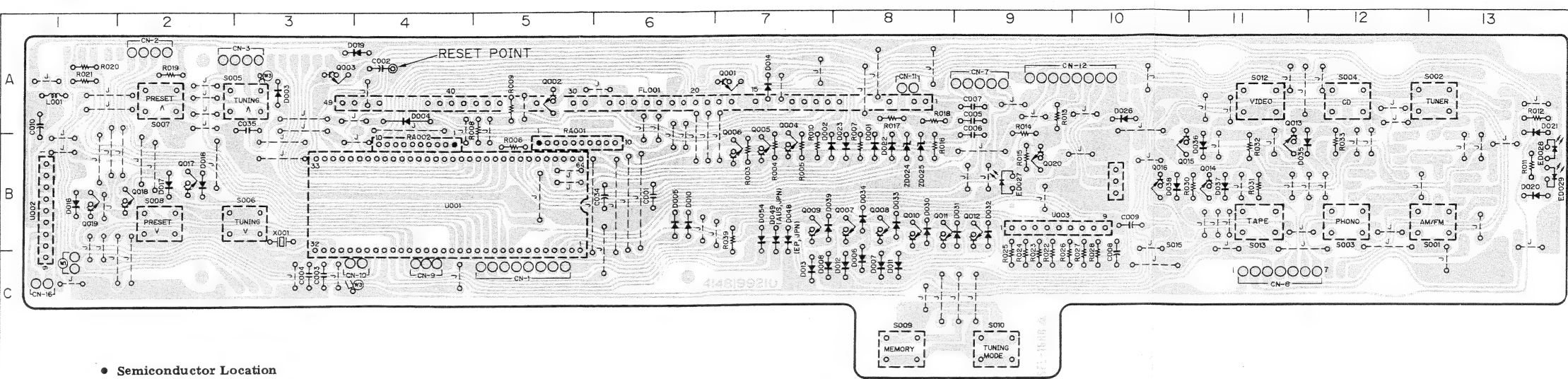
★: Unstocked parts.

Schematic Ref. No.	Part No.	Description
C034	OB05885A	CE 100μ 10V
C035	OB09292A	CC 0.1μ 50V Z
S001-008	OC85398A	Tact Switch
S009,010	OB70130A	Tact Switch
S012,013	OC85398A	Tact Switch
FL001	OB90463A	F.L. Display
CN1	OC85533A	8P Connector Ass'y 300mm
CN2	OC85531A	4P Connector Ass'y 300mm
CN3	OC85530A	4P Connector Ass'y 250mm
CN7	OC85532A	5P Connector Ass'y 500mm
CN8	OC85534A	7P Connector Ass'y 150mm
CN9	OB83494A	3P Connector Ass'y 350mm
CN10	OC85529A	2P Connector Ass'y 500mm
CN11	OC85528A	2P Connector Ass'y 200mm
CN12	OC85535A	8P Connector Ass'y 500mm
CN16	OC85536A	2P Connector Ass'y 150mm
CN17	OC85881A	3P Connector Ass'y 500mm (OTR)
	OC85399A	Remote Control Receiver SBX 1610-52 (1)
	OC85400A	Shield Plate MC (1)

6.11. System Remote P.C.B. Ass'y

	★ CA81721A	System Remote P.C.B. Ass'y (USA, CAN, OTR)
	★ CA81810A	System Remote P.C.B. Ass'y (EP, UK, AUS)
	★ BA08185A	System Remote P.C.B. Ass'y (JPN)
	OC85540A	System Remote P.C.B.
U701	OB06143A	IC μPD4001BC
U702	OB06219A	IC μPD4081BC
Q701	OB10113A	TR 2SC1815 (G)
Q702	OB06013A	TR 2SA733
Q703	OB10113A	TR 2SC1815 (G)
Q704,705	OB06100A	TR 2SC945
Q706,707	OB06100A	TR 2SC945
Q708	OB06100A	TR 2SC945
Q709	OB10104A	TR DTC114TS
D431	OB12718A	SiD KBU4D
D432	OB12586A	SiD 1N4002L
D701,702	OB06398A	SiD 1SS176
D703,704	OB06398A	SiD 1SS176
D705,706	OB06398A	SiD 1SS176
D707,708	OB06398A	SiD 1SS176
D709	OB06398A	SiD 1SS176
D711,712	OB06398A	SiD 1SS176
D713,714	OB06398A	SiD 1SS176
R431	OB05615A	RK 22K 1/4W J
R701	OB09693A	RK 4.7K 1/6W J
R702	OB09733A	RK 220K 1/6W J
R703	OB09701A	RK 10K 1/6W J
R704	OB09685A	RK 2.2K 1/6W J
R705	OB09731A	RK 180K 1/6W J
R706	OB20093A	RK 1.5M 1/6W J
R707	OB09739A	RK 390K 1/6W J
R708	OB09701A	RK 10K 1/6W J
R709	OB09709A	RK 22K 1/6W J
R710	OB09725A	RK 100K 1/6W J
R711	OB09701A	RK 10K 1/6W J
R712,713	OB09693A	RK 4.7K 1/6W J
R714	OB09677A	RK 1K 1/6W J
R715	OB09717A	RK 47K 1/6W J
R716,717	OB09701A	RK 10K 1/6W J
R718	OB09701A	RK 10K 1/6W J
R719,720	OB09717A	RK 47K 1/6W J
R721,722	OB09701A	RK 10K 1/6W J
R726	OB09637A	RK 22 1/6W J
R728	OB09661A	RK 220 1/6W J
R729	OB09717A	RK 47K 1/6W J
R730	OB09701A	RK 10K 1/6W J
R731	OB09677A	RK 1K 1/6W J
R732	OB09717A	RK 47K 1/6W J
C431,432	OB41901A	CC 0.022μ 500V Z
C433,434	OB40516A	CE 6800μ 63V
C435,436	OB41176A	CML 0.22μ 63V J
C437	OB40029A	CE 4.7μ 50V
C701	OB09290A	CC 0.01μ 50Z
C702	OB01405A	CE 1μ 50V
C703	OB40029A	CE 4.7μ 50V
CN12	OB81765A	8P T-Post
CN18	OB81975A	2P T-Post
	OB81952A	Stereo Mini Jack HTJ-035-11 (2)
	OB81953A	6P DIN Socket LN-0507-06 (1)
	OJ05670A	Earth Plate (1)

6.10. Display & Control P.C.B. Ass'y



● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
U001	B-4	D005	B-6
U002	B-1	D006	C-8
U003	B-9	D007	C-8
Q001	A-7	D008	C-7
Q002	A-5	D010	B-6
Q003	A-3	D011	C-8
Q004	B-7	D012	C-8
Q005	B-7	D013	C-7
Q006	B-7	D014	A-7
Q007	B-8	D016	B-1
Q008	B-8	D017	B-2
Q009	B-7	D018	B-2
Q010	B-8	D019	A-4
Q011	B-8	D020	B-13
Q012	B-9	D021	B-13
Q013	B-11	D022	B-8
Q014	B-11	D023	B-8
Q015	B-10	D026	A-10
Q016	B-10	D030	B-8
Q017	B-2	D031	B-9
Q018	B-2	D032	B-9
Q019	B-1	D033	B-8
Q020	B-9	D034	B-8
ZD024	B-8	D035	B-11
ZD025	B-8	D036	B-11
ED027	B-9	D037	B-11
ED028	B-13	D038	B-10
ED029	B-29	D039	B-7
D001	B-8	D048	B-7
D002	B-7	D049	B-7
D003	A-3	D054	B-7
D004	A-4		

Fig. 6.10

6.11. System Remote P.C.B. Ass'y

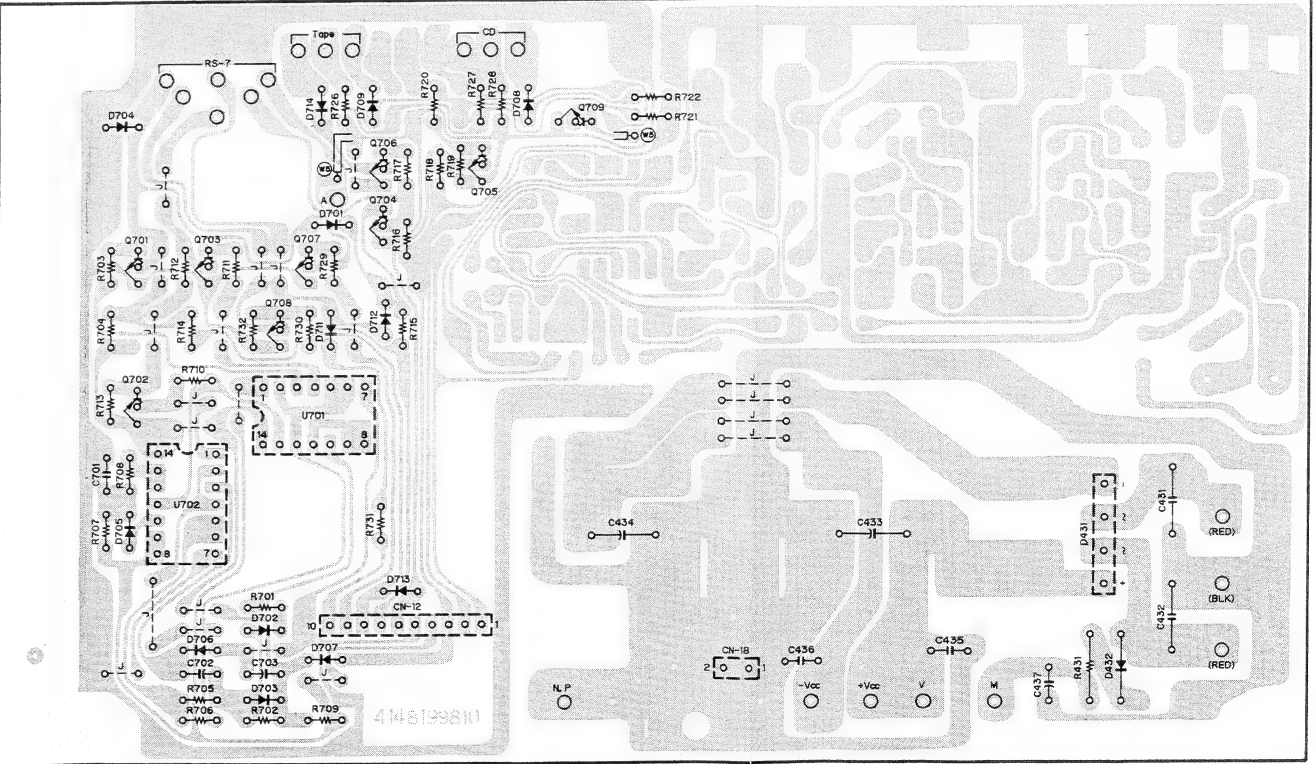


Fig. 6.11



6.12. Main P.C.B. Ass'y

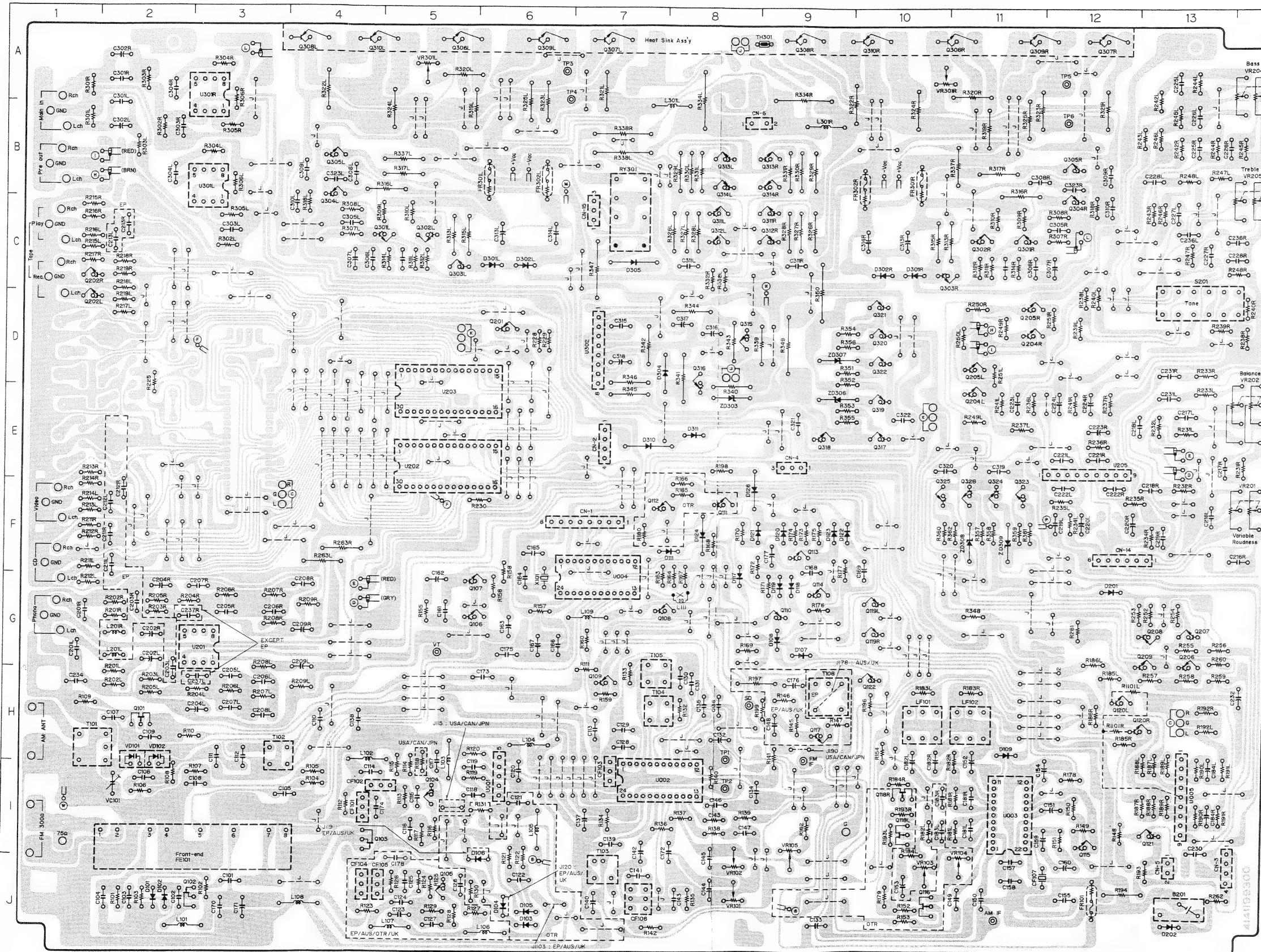


Fig. 6.12

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
U001	I-6	Q311L	C-8
U002	I-7	Q311R	C-9
U003	I-11	Q312L	C-8
U004	G-7	Q312R	C-9
U005	I-13	Q313L	B-8
U201	G-3	Q313R	B-9
U202	E-5	Q314L	B-8
U203	E-5	Q314R	B-9
U205	E-12	Q315	D-8
U301L	B-3	Q316	D-8
U301R	A-3	Q317	E-10
U302	D-7	Q318	E-9
Q101	H-2	Q319	E-10
Q102	J-3	Q320	D-10
Q103	I-4	Q321	D-10
Q104	I-5	Q322	D-10
Q105	J-5	Q323	F-10
Q106	G-6	Q324	F-10
Q107	G-6	Q325	F-10
Q108	G-7	Q326	F-10
Q109	H-7	VD101	H-2
Q110	G-9	VD102	H-2
Q111	F-8	ZD303	E-8
Q112	F-7	ZD306	E-9
Q113	F-9	ZD307	D-9
Q114	G-9	ZD308	F-11
Q115	I-12	ZD309	F-11
Q116	J-10	D101	J-2
Q117	H-9	D102	J-2
Q118L	I-10	D103	J-6
Q118R	I-10	D104	J-6
Q119L	G-10	D105	J-6
Q119R	G-10	D106	J-6
Q120L	H-12	D107	G-9
Q120R	H-13	D108	G-9
Q121	I-13	D109	H-11
Q122	H-10	D111	F-8
Q201	D-6	D117	G-8
Q202L	D-1	D118	G-9
Q202R	C-1	D119	G-9
Q204L	E-11	D120	F-9
Q204R	D-11	D121	F-8
Q205L	D-11	D122	F-9
Q205R	D-11	D123	F-9
Q206	G-13	D124	F-8
Q207	G-13	D126	F-8
Q208	G-13	D201	G-12
Q209	G-13	D202	J-13
Q301L	C-5	D301L	C-6
Q301R	C-11	D301R	C-10
Q302L	C-5	D302L	C-6
Q302R	C-11	D302R	C-10
Q303L	C-5	D304	D-7
Q303R	C-10	D305	C-7
Q304L	B-4	D310	E-7
Q304R	C-12	D311	E-8
Q305L	B-4		
Q305R	B-12		
Q306L	A-5		
Q306R	A-11		
Q307L	A-7		
Q307R	A-12		
Q308L	A-4		
Q308R	A-9		
Q309L	A-5		
Q309R	A-11		
Q310L	A-4		
Q310R	A-10		

Note: Q306L/R — Q310L/R and TH301 are mounted on the Heat Sink Ass'y.

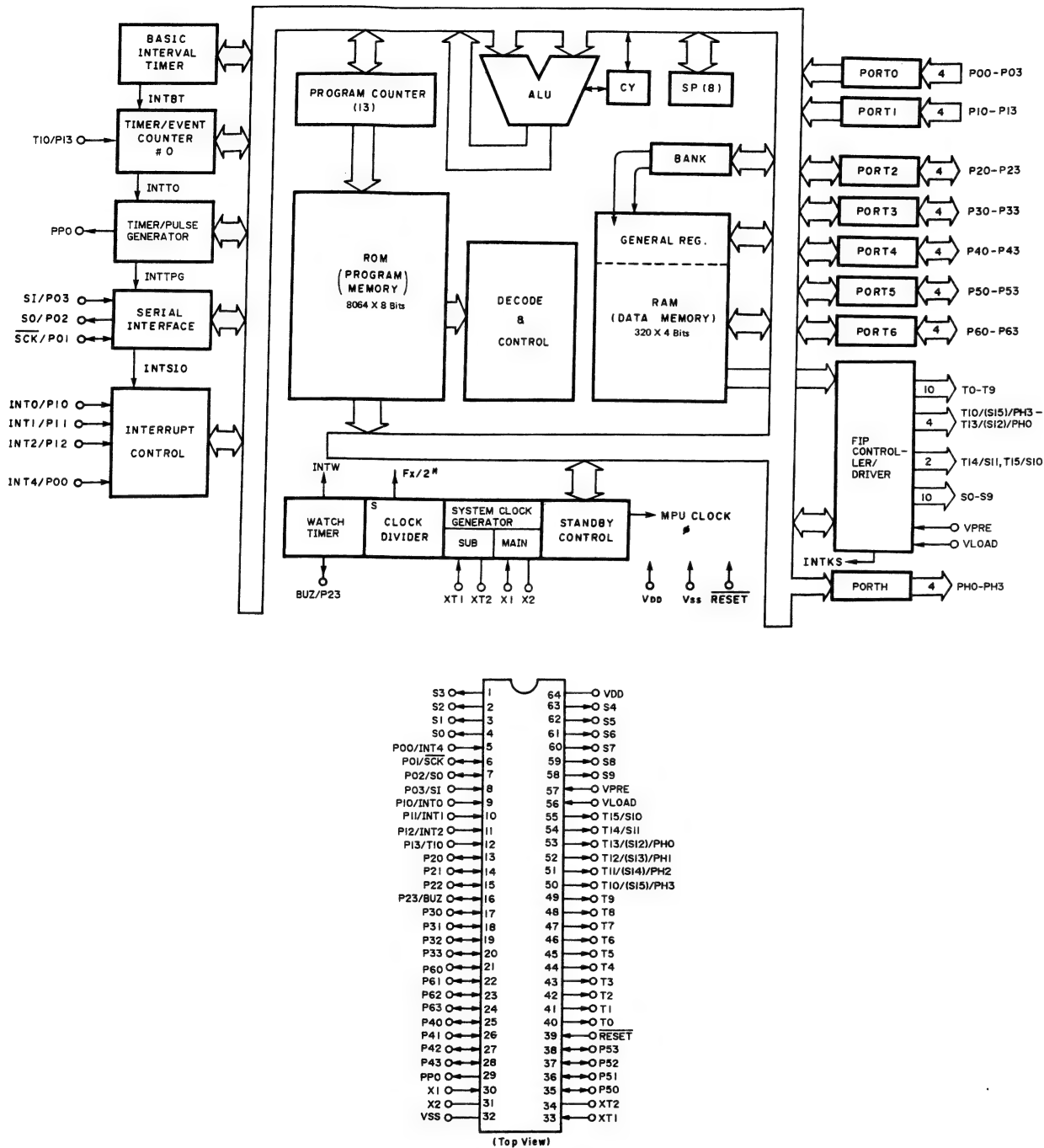


\*: Unstocked parts.

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
6.12. Main P.C.B. Ass'y			CF106	OB41897A	Ceramic Filter SPZ450G3L	R158	OB09677A	RK 1K 1/6W J	R303L.R	OB09653A	RK 100 1/6W J	C144	OB40029A	CE 4.7μ 50V	C318	OB01400A	CE 100μ 16V
	* CA81705A	Main P.C.B. Ass'y (USA, CAN)	CF107	OB41927A	Ceramic Resonator CSB456F	R159	OB09701A	RK 10K 1/6W J	R304L.R	OB09725A	RK 100K 1/6W J	C145,146	OB09291A	CC 0.022μ 50V Z	C319,320	OB09292A	CC 0.1μ 50V Z
	* CA81741A	Main P.C.B. Ass'y (EP)	LF101,102	OB51295A	FM MPX Trap TWS-358-484	R160	OB09741A	RK 470K 1/6W J	R306L.R	OB22265A	RM 2.2K 1/6W F	C147	OB09290A	CC 0.01μ 50V Z	C321,322	OB09292A	CC 0.1μ 50V Z
	* CA81802A	Main P.C.B. Ass'y (UK)	T101	OB51269A	AM Ant Coil TWS-385-638	R162	OB09701A	RK 10K 1/6W J	R307L.R	OB22314A	RM 5.6K 1/6W F	C148	OB09148A	CE 10μ 25V (LN) (EP, UK, AUS)	C323L.R	OB09393A	CC 68P 50V J
	* CA81803A	Main P.C.B. Ass'y (AUS)	T102	OB51270A	AM OSC Coil TWS-358-644	R163,164	OB09701A	RK 10K 1/6W J	R308L.R	OB09677A	RK 1K 1/6W J	C149	OB09148A	CE 10μ 25V (LN) (USA, CAN, OTR, JPN)	RY301	OB90279A	Relay DS2Y-S-DC24V
	* CA81804A	Main P.C.B. Ass'y (OTR)	T103	OB51271A	AM IFT TWS-358-645	R165	OB09717A	RK 47K 1/6W J (OTR)	R309L.R	OB09671A	RK 560 1/6W J				FE101	OB91027A	FM Front-End FE415-A03 (USA, CAN, AUS, OTR)
	* BA08175A	Main P.C.B. Ass'y (JPN)	T104	OB51272A	FM DET (A) TWS-358-636	R166	OB09677A	RK 1K 1/6W J (OTR)	R310L.R	OB09671A	RK 560 1/6W J					OB91033A	FM Front-End FE415-G07 (EP, UK)
			T105	OB51273A	FM DET (B) TWS-358-637	R167,168	OB09701A	RK 10K 1/6W J	R311L.R	OB09647A	RK 56 1/6W J					OB91032A	FM Front-End FE415-J03 (JPN)
U001	OC85527A	Main P.C.B.				R169	OB09725A	RK 100K 1/6W J	R312L.R	OB09647A	RK 56 1/6W J						Push Switch
U002	OB11156A	IC TA7060AP	T108	OB51289A	LP Filter (EP)	R170,171	OB09725A	RK 10K 1/6W J	R313L.R	OB05795A	RK 150 1/4W J	C150	OB05682A	CML 0.068μ 50V J	SN21	OC85511A	8P T-Post
U003	OB11875A	IC LA1266	L101,102	OB51274A	Coil 22μH K	R172	OB09701A	RK 10K 1/6W J	R314L.R	OB05683A	RK 1.8K 1/4W J	C151	OB01405A	CE 1μ 50V	CN2,3	OB81765A	4P T-Post
U004	OB11876A	IC LA3401	L103,104	OB51274A	Coil 22μH K	R173	OB09709A	RK 22K 1/6W J	R315L.R	OB05641A	RK 47K 1/4W J	C152,153	OB01674A	CE 10μ 25V	CN4	OB81761A	4P T-Post
U005	OB11877A	IC LC7218	L105	OB51274A	Coil 22μH K (OTR)	R174	OB09719A	RK 56K 1/6W J	R316L.R	OB05641A	RK 47K 1/4W J	C154	OB01405A	CE 1μ 50V	CN5	OB81760A	3P T-Post
U201	OB11050A	IC NJM4558S	L106,107	OB51274A	Coil 22μH K	R175	OB09701A	RK 10K 1/6W J	R317L.R	OB05631A	RK 82 1/4W J	C155	OB09291A	CC 0.022μ 50V Z	CN6	OB81759A	2P T-Post
U202	OB06387A	IC NJM2043DD				R176	OB09725A	RK 100K 1/6W J	R318L.R	OB09701A	RK 10K 1/6W J	C157	OB05796A	CML 0.047μ 50V J	CN15	OB81763A	6P T-Post
U203	OB11878A	IC LC7821	L108,109	OB51274A	Coil 22μH K	R177	OB09693A	RK 4.7K 1/6W J	R319L.R	OB09301A	RK 2K 1/4W J	C158	OB09287A	CC 680P 50V J		OB81760A	3P T-Post
U205	OB11879A	IC LC7822	L111	OC85903A	Coil 100μH K	R178	OB09677A	RK 1K 1/6W J	R320L.R	OB05577A	RK 330 1/4W J	C159	OB40023A	CE 0.22μ 50V		OB81760A	4P T-Post
U301L.R	OB11529A	IC μPC4570HA	L201L.R	OB51266A	Audio Coil 48μH (EP)	R179	OB09725A	RK 100K 1/6W J	R321L.R	OB01679A	RK 100 1/4W J	C160	OB40024A	CE 0.33μ 50V		OB81760A	2P T-Post
U302	OB11577A	IC NJM5534DD				R180	OB09717A	RK 47K 1/6W J (OTR)	R322L.R	OB24226A	RC 0.22 5W	C161	OB40103A	CE 47μ 35V		OB81760A	6P T-Post
U302	OB11246A	IC μPC1237H				R181L.R	OB22465A	RM 120K 1/6W F	R323L.R	OB24226A	RC 0.22 5W	C162	OB09793A	CC 30P 50V J		OB81760A	3P T-Post
Q101	OB10181A	FET 2SK117 (GR)	L301L.R	OC85512A	Audio Coil 0.8μH	R182L.R	OB22286A	RM 3.3K 1/6W F	R324L.R	OB05560A	RK 18K 1/4W J	C163				OB81760A	2P RCA Jack (1)
Q102,103	OB10127A	FET 2SK241 (GR)	VR101,102	OC85452A	Semi VR 100K	R183L.R	OB22286A	RM 3.3K 1/6W F	R325L.R	OB05560A	RK 18K 1/4W J	C164,165	OB41709A	CC 0.022μ 50V Z (USA, CAN, EP, UK, AUS, OTR)		OB81881A	4P RCA Jack (3)
Q104	OB06115A	TR 2SC1675 (L)	VR103	OC85452A	Semi VR 100K	R184L.R	OB09677A	RK 1K 1/6W J	R326L.R	OB01889A	RK 100K 1/4W J					OC85375A	4P Antenna Terminal (USA, CAN, AUS, OTR)
Q105	OB06115A	TR 2SC1675 (L)	VR104	OC85452A	Semi VR 100K	R185L.R	OB09725A	RK 100K 1/6W J	R327L.R	OB01889A	RK 100K 1/4W J	C166	OB09291A	CC 0.022μ 50V Z		OC85443A	2P Antenna Terminal (EP, UK, JPN)
						R186L.R	OB09725A	RK 100K 1/6W J	R328L.R	OB24229A	RF 3.3 1W J	C167	OB01403A	CC 0.022μ 50V Z			(1)
Q106,107	OB06100A	TR 2SC945	VR105	OC85452A	Semi VR 100K	R187L.R	OB09725A	RK 100K 1/6W J	R329L.R	OB01888A	RK 10K 1/4W J	C168	OB09291A	CC 0.022μ 50V Z		OE00857A	BT3x6 ⊕ Binding
Q108	OB10053A	TR DTA144ES	VR201	OB30088A	Volume 250K (MN)x2	R188L.R	OB09723A	RK 82K 1/6W J	R330L.R	OB24208A	RF 330 2W J	C169	OB01403A	CC 0.022μ 50V Z			(3)
Q109	OB06013A	TR 2SA733	VR202	OB30097A	Volume 300Kx2	R189L.R			R331L.R	OB24208A	RF 330 2W J	C170	OB01883A	CC 3.3μ 50V		0J05670A	Earth Plate (1)
Q110	OB10053A	TR DTA144ES	VR204	OB30095A	Volume 50Kx2	R190L.R			R332L.R	OB01888A	RK 10K 1/4W J	C171	OB09291A	CC 0.022μ 50V Z			
Q111	OB06013A	TR 2SC945	VR205	OB30090A	Volume 100Kx2				R333L.R	OB01888A	RK 10K 1/4W J	C172	OB09291A	CC 0.022μ 50V Z			
Q112	OB06013A	TR 2SA733 (OTR)	VR301L.R	OC85510A	Semi VR 1K	R191L.R	OB09719A	RK 56K 1/6W J	R334L.R	OB01682A	RK 6.8K 1/4W J	C173	OB01403A	CC 0.022μ 50V Z			
Q113	OB06013A	TR 2SC945				R192L.R	OB09677A	RK 1K 1/6W J	R335L.R	OB20520A	RK 1.5K 1/2W J	C174	OB01403A	CC 0.022μ 50V Z			
Q114	OB06013A	TR 2SA733				R193	OB09725A	RK 100K 1/6W J	R336L.R	OB09391A	RK 91K 1/4W J	C175	OB01403A	CC 0.022μ 50V Z			
Q115	OB06013A	TR 2SC945				R193L.R	OB09701A	RK 10K 1/6W J	R337L.R	OB01933A	RK 220 1/4W J	C176	OB01403A	CC 0.022μ 50V Z			
Q116	OB10151A	FET 2SK364 (OTR)					OB09749A	RK 1M 1/6W J	R338L.R	OB01889A	RK 100K 1/4W J	C177	OB40023A	CE 0.22μ 50V			
Q117	OB06100A	TR 2SC945							R339L.R	OB05508A	RK 56K 1/4W J	C178	OB41872A	CE 18P 50V J			
										FR347	OB24061A	RF 2.7K 1W J					
Q118L.R	OB10151A	FET 2SK364 (OTR)				R194	OB01680A	RK 820 1/4W J	R348	OB09717A	RK 47K 1/6W J	C181L.R	OB41921A	CSP 560P 50V J (USA, CAN)			
Q119L.R	OB10053A	TR DTA144ES				R196	OB09731A	RK 180K 1/6W J	R349,350	OB24357A	RC 220 5W J		OB41215A	CPP 390P 100V J (EP, UK, AUS, OTR)			
Q120L.R	OB06299A	TR 2SC2878				R197	OB09193A	RK 220 1/4W J	R351,352	OB09685A	RK 2.2K 1/6W J		OB41215A	CPP 390P 100V J (EP, UK, AUS, OTR)			
Q121,122	OB06013A	TR 2SC945				R198	OB09709A	RK 22K 1/6W J	R353,354	OB09685A	RK 2.2K 1/6W J	C182L.R	OB09148A	CE 10μ 25V (LN)			
Q201	OB06013A	TR 2SA733				R199	OB09701A	RK 10K 1/6W J	R355,356	OB09673A	RK 680 1/6W J	C183L.R	OB41207A	CE 180P 100V J (OTR)			
Q202L.R	OB06299A	TR 2SC2878				R201L.R	OB09743A	RK 560K 1/6W J	R357,358	OB09685A	RK 2.2K 1/6W J		OB09148A	CE 10μ 25V (LN)			
Q204L.R	OB06299A	TR 2SC2878				R202L.R	OB09718A	RK 51K 1/6W J	R359,360	OB09673A	RK 680 1/6W J		OB41207A	CE 180P 100V J (OTR)			
Q205L.R	OB06299A	TR 2SC2878				R203L.R	OB09725A	RM 1K 1/6W F	R361,362	OB09677A	RK 1K 1/6W J	C184L.R	OB09148A	CE 10μ 25V (LN)			
Q206	OB06013A	TR 2SA733				R204L.R	OB09725A	RK 100K 1/6W J	FR101	OB24358A	Fuse Resistor 47 1/4W (USA, CAN, EP, UK, AUS, OTR)		OB41207A	CE 180P 100V J (OTR)			
Q207	OB06013A	TR 2SC945				R205L.R	OB09725A	RM 560K 1/6W F					OB41207A	CE 180P 100V J (OTR)			
Q208	OB06013A	TR 2SA733				R206L.R	OB22542A	RM 47K 1/6W F					OB41207A	CE 180P 100V J (OTR)			
Q209	OB06013A	TR 2SC945				R207L.R	OB22229A	RM 47K 1/6W F					OB41207A	CE 180P 100V J (OTR)			
Q301L.R	OB06142A	TR 2SC240 (BL)				R208L.R	OB09725A	RK 100K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q302L.R	OB06142A	TR 2SC240 (BL)				R209L.R	OB09725A	RK 100K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q303L.R	OB06142A	TR 2SC240 (BL)				R210L.R	OB09725A	RK 100K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q304L.R	OB10204A	TR 2SA1145				R211L.R	OB09645A	RK 47 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q305L.R	OB10205A	TR 2SC2705				R212L.R	OB09719A	RK 56K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q311L.R	OB06142A	TR 2SC2240 (BL)				R213L.R	OB09645A	RK 47 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q312L.R	OB10050A	TR 2SA970 (BL)				R214L.R	OB09719A	RK 56K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q313L.R	OB10205A	TR 2SC2705				R215L.R	OB09645A	RK 47 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q314L.R	OB10050A	TR 2SA970 (BL)				R216L.R	OB09719A	RK 56K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q315	OB06322A	TR 2SC2002 (K)				R217L.R	OB09681A	RK 1.5K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q316	OB06372A	TR 2SA953 (L)				R218L.R	OB09725A	RK 100K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q317,318	OB10248A	TR 2SD313 (E)				R219L.R	OB09725A	RK 47K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q319	OB06013A	TR 2SA733				R220L.R	OB09717A	RK 47K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q320,321	OB10264A	TR 2SB500 (E)				R221L.R	OB09717A	RK 47K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q322	OB06010A	TR 2SC945				R222L.R	OB09709A	RK 22K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q323	OB06010A	TR 2SC945				R223L.R	OB09699A	RK 8.2K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q324,325	OB06013A	TR 2SA733				R224L.R	OB09707A	RK 18K 1/6W J					OB41207A	CE 180P 100V J (OTR)			
Q326	OB06010A	TR 2SC945				R225L.R	OB09653A	RK 100 1/6W J									

7. SCHEMATIC DIAGRAMS

7.1. IC Block Diagrams





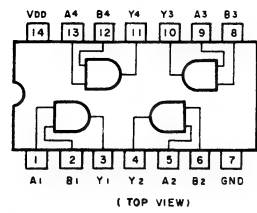


Fig. 7.1.5 AND Gate C-MOS IC  $\mu$ PD4081BC

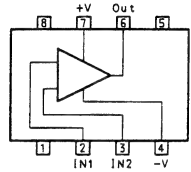


Fig. 7.1.6 Operational Amp. IC NJM5534DD

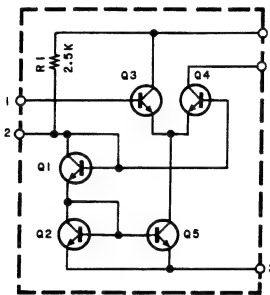


Fig. 7.1.7 FM IF Amp. IC TA7060AP

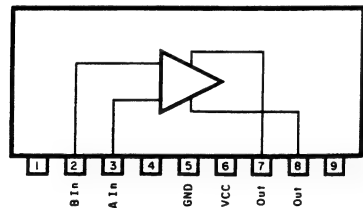


Fig. 7.1.8 Motor Driver BA6208

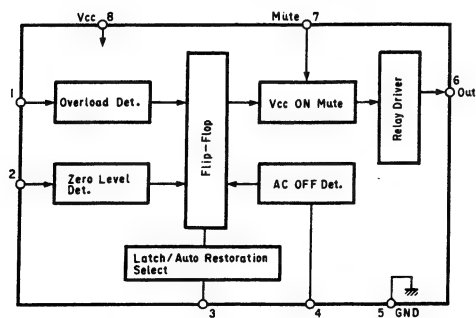


Fig. 7.1.9 Power Amp. Protector  $\mu$ PC1237H (U302)

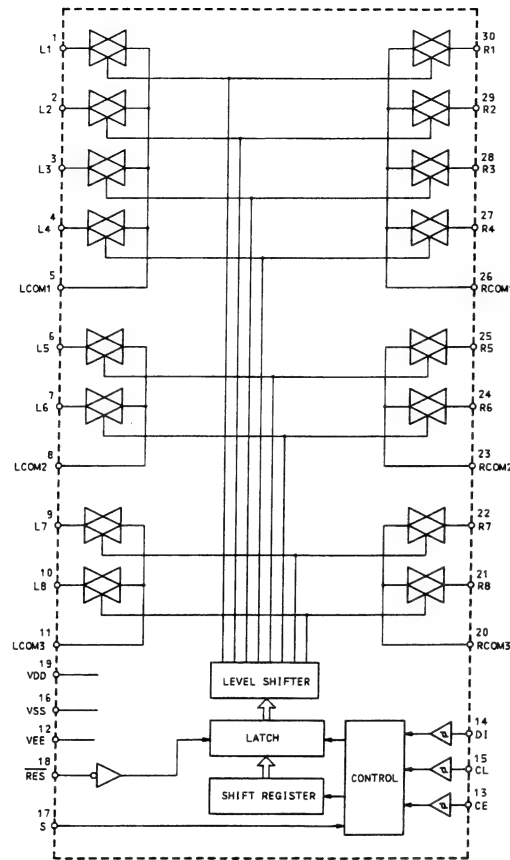


Fig. 7.1.10 Analog Function Switch LC7821 (U202)

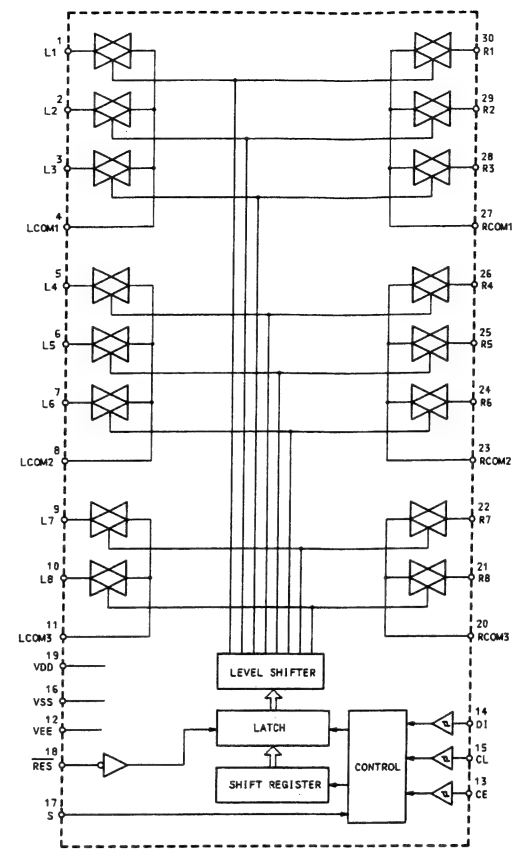


Fig. 7.1.11 Analog Function Switch LC7822 (U203)

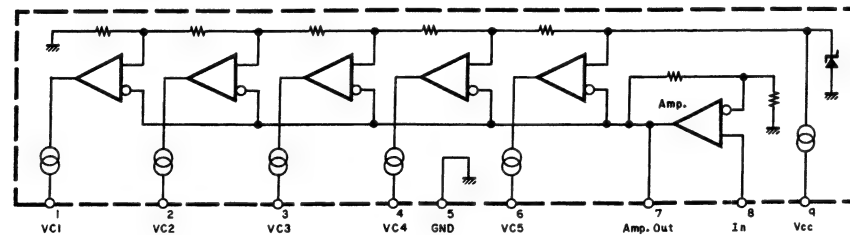


Fig. 7.1.12 Signal Meter Driver LB1413N

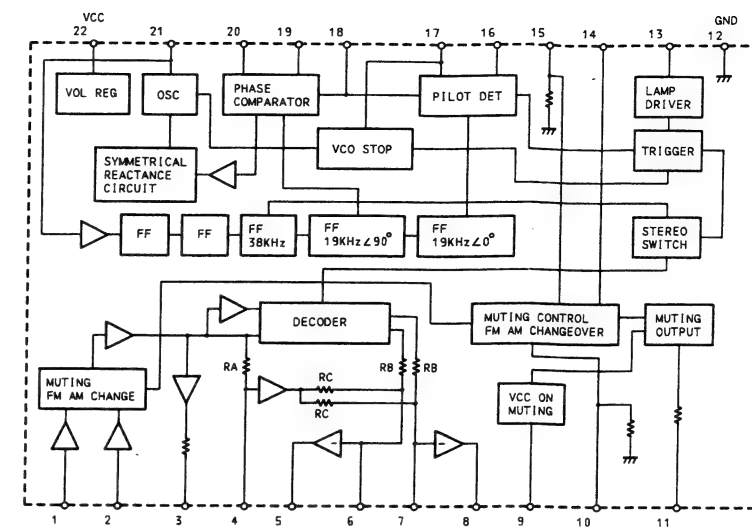


Fig. 7.1.13 Multiplexer LA3401

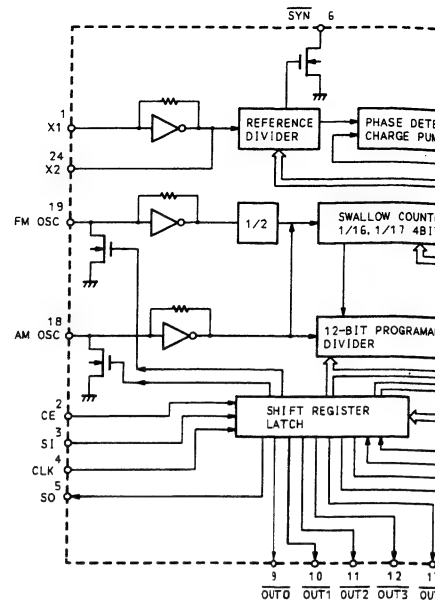


Fig. 7.1.15 PLL Frequency

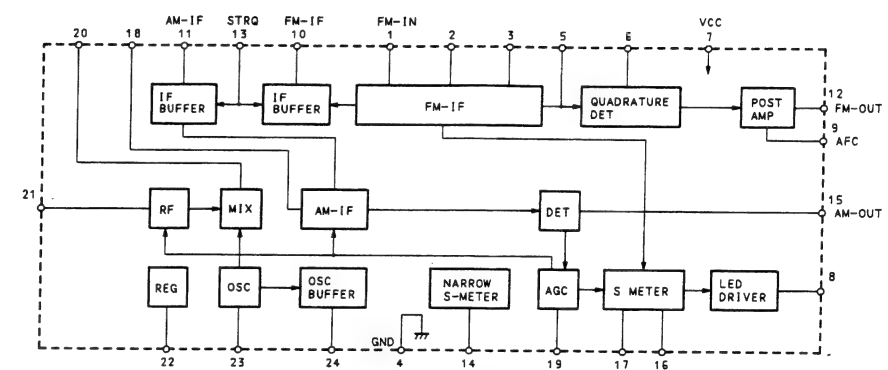
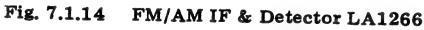
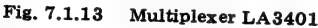
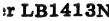
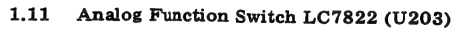


Fig. 7.1.14 FM/AM IF & Detector LA1266

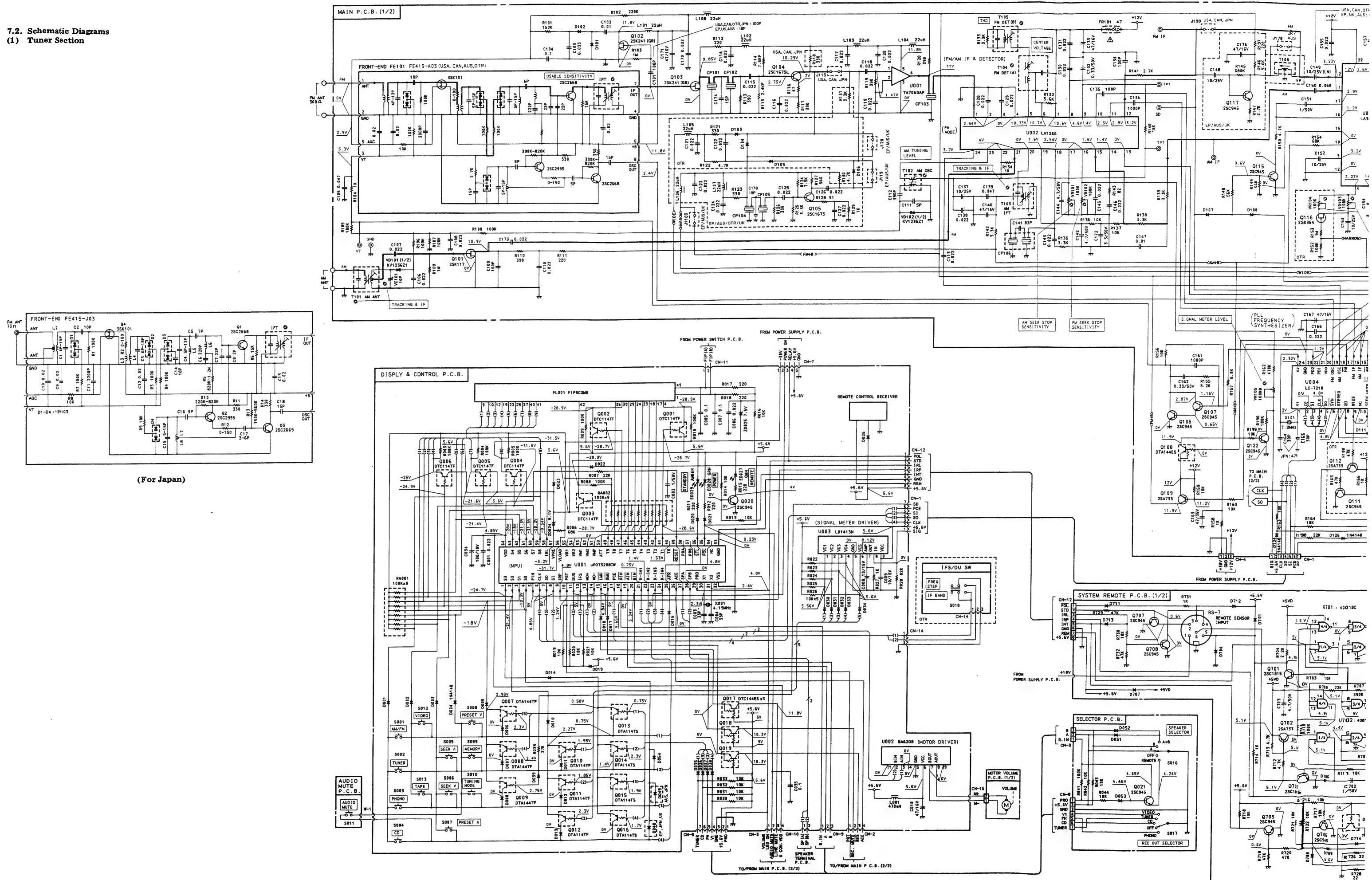


### U004 PLL Frequency Synthesizer (LC7218)

Pin No.	Signal Name	I/O	Function
1 24	X1 X2	I O	7.2MHz crystal is connected.
2	CE	I	Chip enable input signal. Active "H".
3	SI	I	Serial input data from U001 (MPU).
4	CLK	I	Clock input for SI (pin 3) and SO (pin 5).
5	SO	O	Serial output data to U001.
6	$\overline{\text{SYN}}$	O	Not used.
7	$\overline{\text{Stereo}}$	I	Stereo signal input. L: Stereo
8	SD	I	SD signal input. H: Station is detected.
9	Wide	O	Wide signal for Other version. H: Wide, L: Narrow
10	NC	O	Open.
11	Seek Mute	O	Seek Mute signal. Active "H".
12	$\overline{\text{DU}}$	O	75 $\mu$ s/50 $\mu$ s select signal for Other version. L: 50 $\mu$ s, H: 75 $\mu$ s
13	AUT	O	Controls muting. Forcedly sets to monaural.
14	$\overline{\text{AM}}$	O	AM mode signal. Active "L".
15	$\overline{\text{AMIF}}$	I	AM IF signal input.
16	$\overline{\text{FM IF}}$	I	FM IF signal input.
17	$\overline{\text{FM}}$	O	FM mode signal. Active "L".
18	AM OSC	I	AM local oscillation signal input.
19	FM OSC	I	FM local oscillation signal input.
20	VDD	—	Approx. 5V is supplied.
21	PD1	O	PLL charge pump output. Not used.
22	PD2	O	PLL charge pump output. f>fref.: H, f<fref.: L f=fref.: floating
23	GND	—	GND

## 7.2. Schematic Diagrams

### (1) Tuner Section



**Fig. 7.2.1**

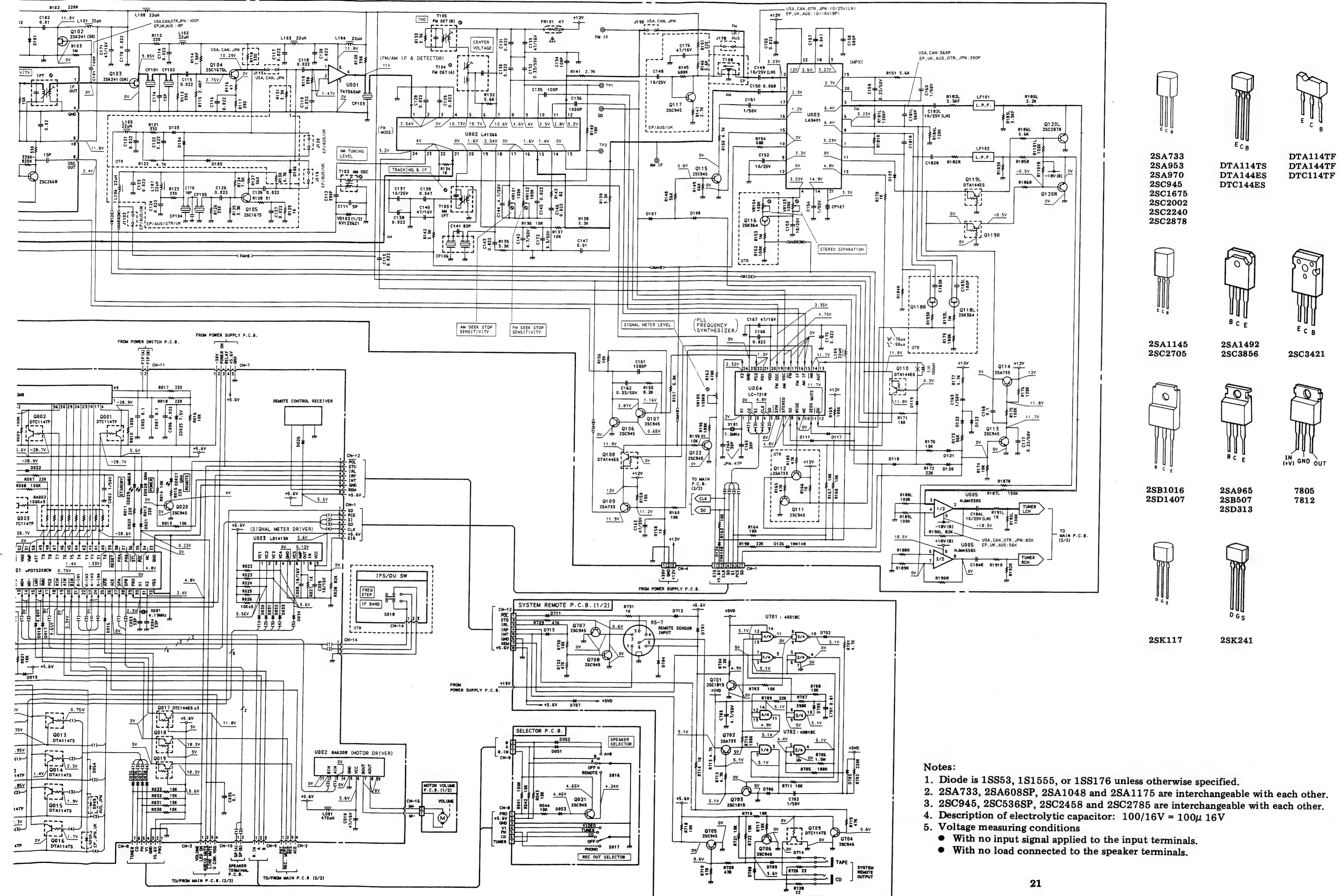


Fig. 7.2.1



(2) Amplifier Section

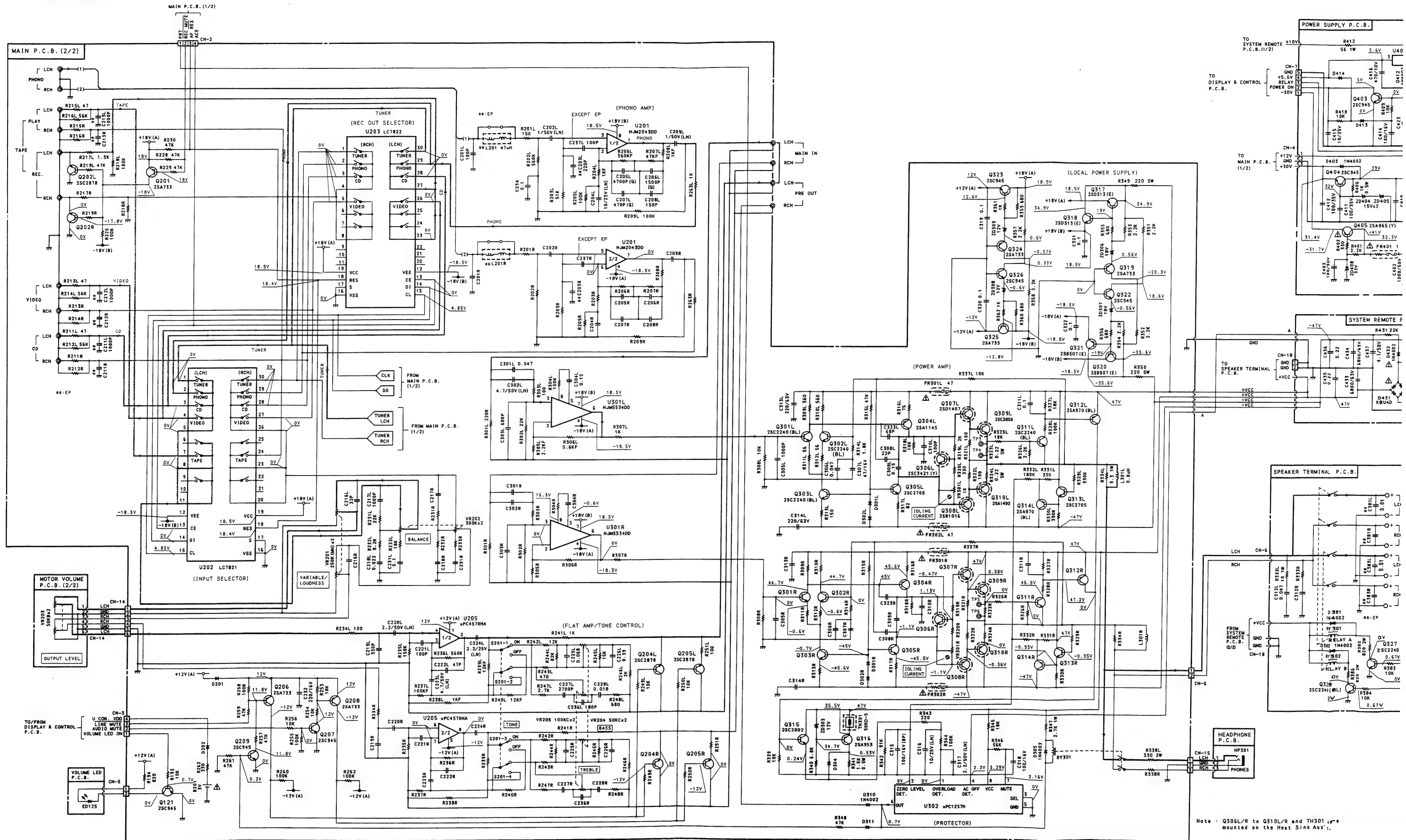
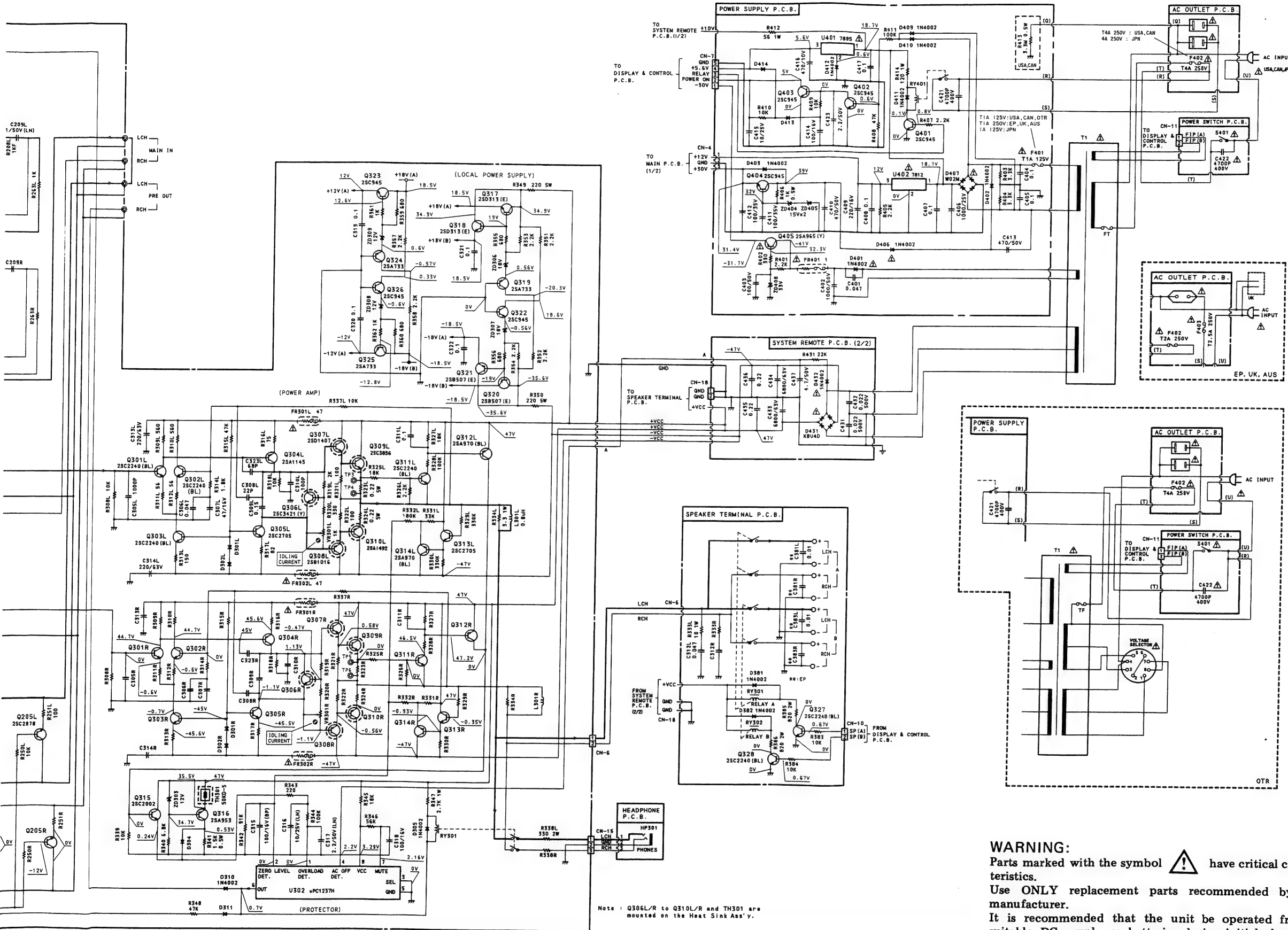



Fig. 7.2.2

**Fig. 7.2.2**

**WARNING:**  
Parts marked with the symbol  have critical characteristics.  
Use **ONLY** replacement parts recommended by the manufacturer.  
It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

# 8. WIRING DIAGRAM

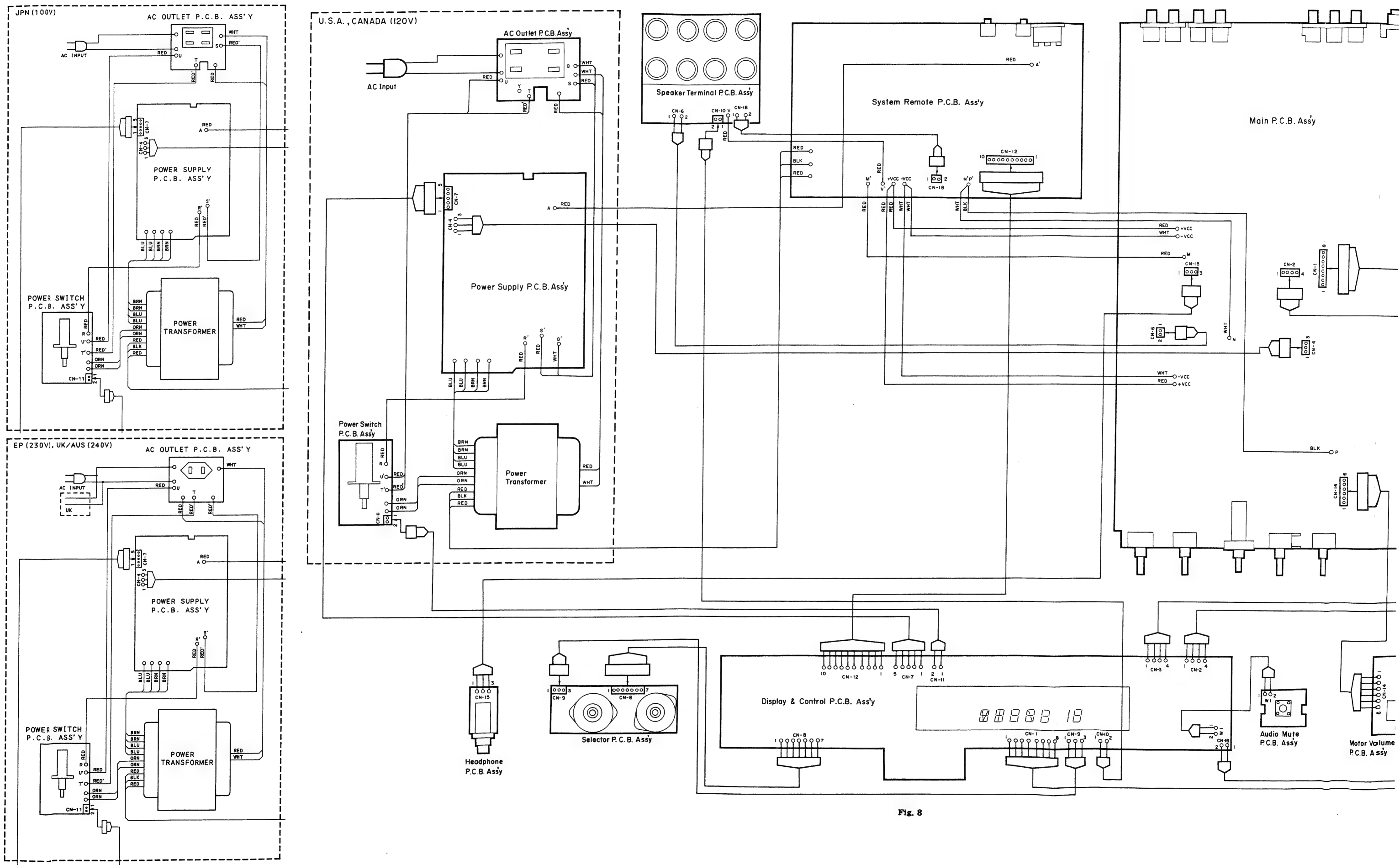


Fig. 8

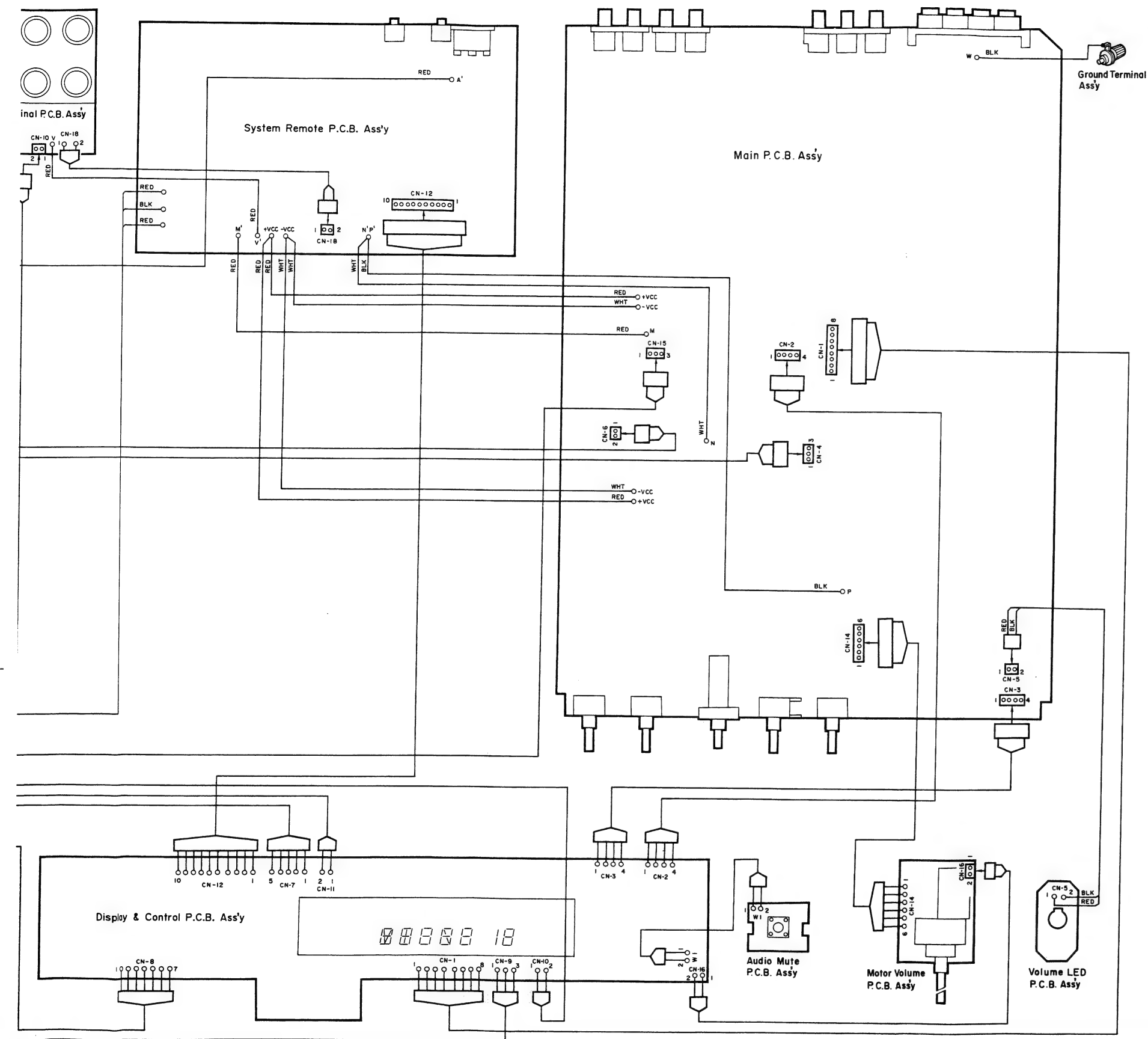
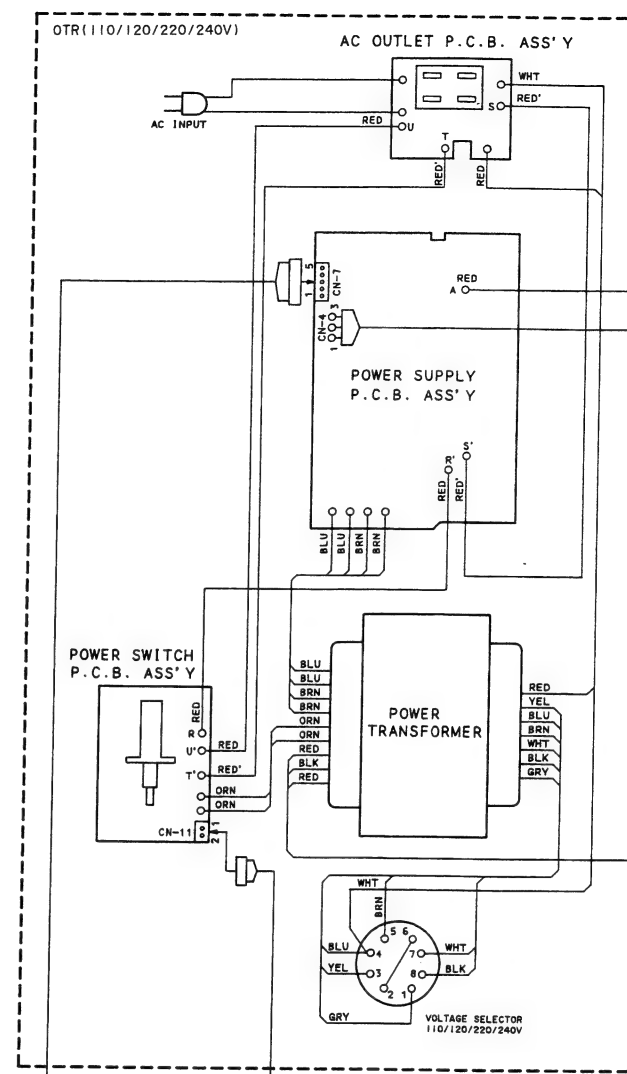


Fig. 8



Notes: 1. Table of wire colors

BRN — Brown	BLU — Blue
RED — Red	VIO — Violet
ORN — Orange	GRY — Gray
YEL — Yellow	WHT — White
GRN — Green	BLK — Black

2. Component side view of the P.C.B. is illustrated unless otherwise specified.

3. Wire tube color is shown in ( ).



## 9. BLOCK DIAGRAMS

### 9.1. Tuner & Display Control Section

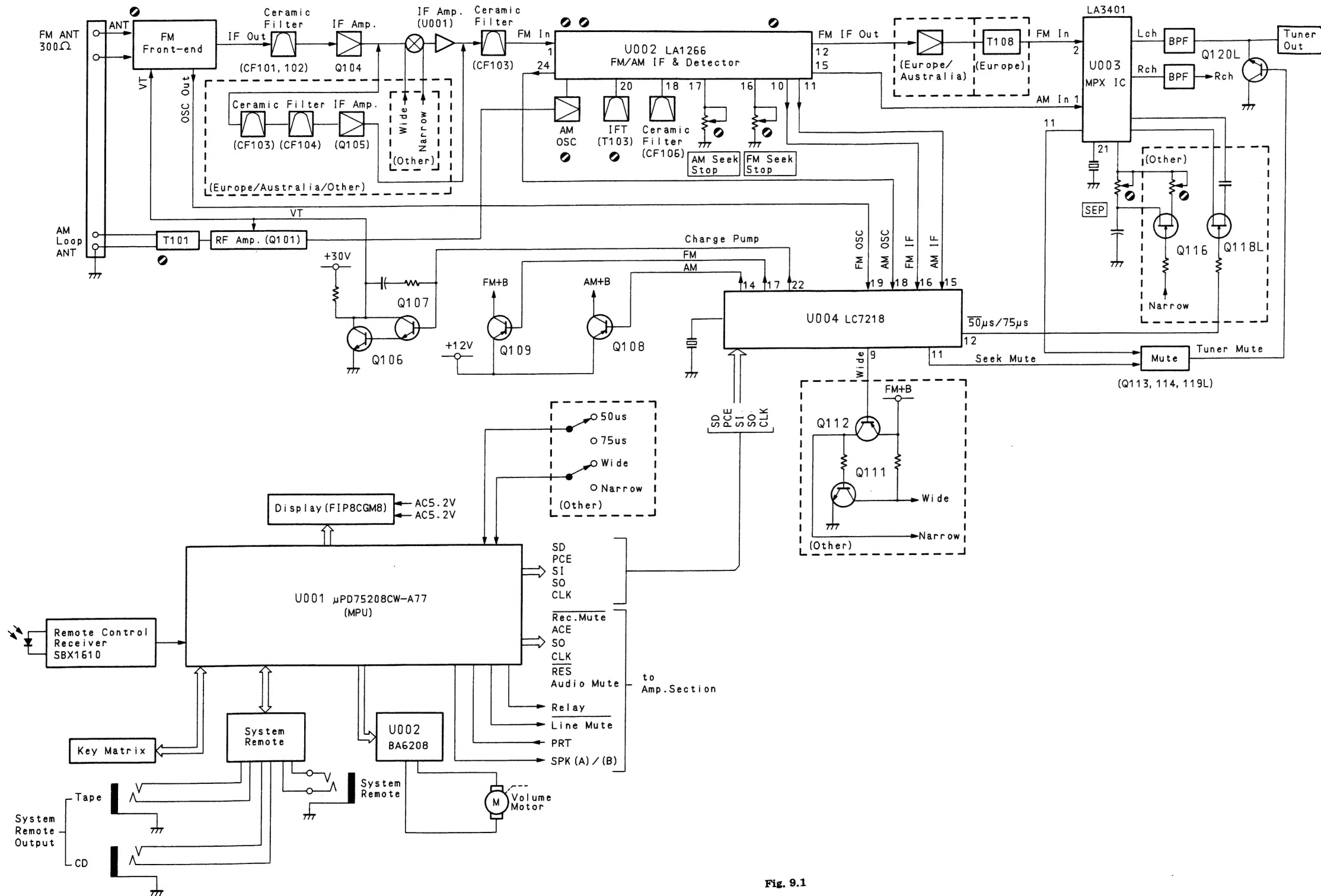


Fig. 9.1

9.2. Amplifier Section

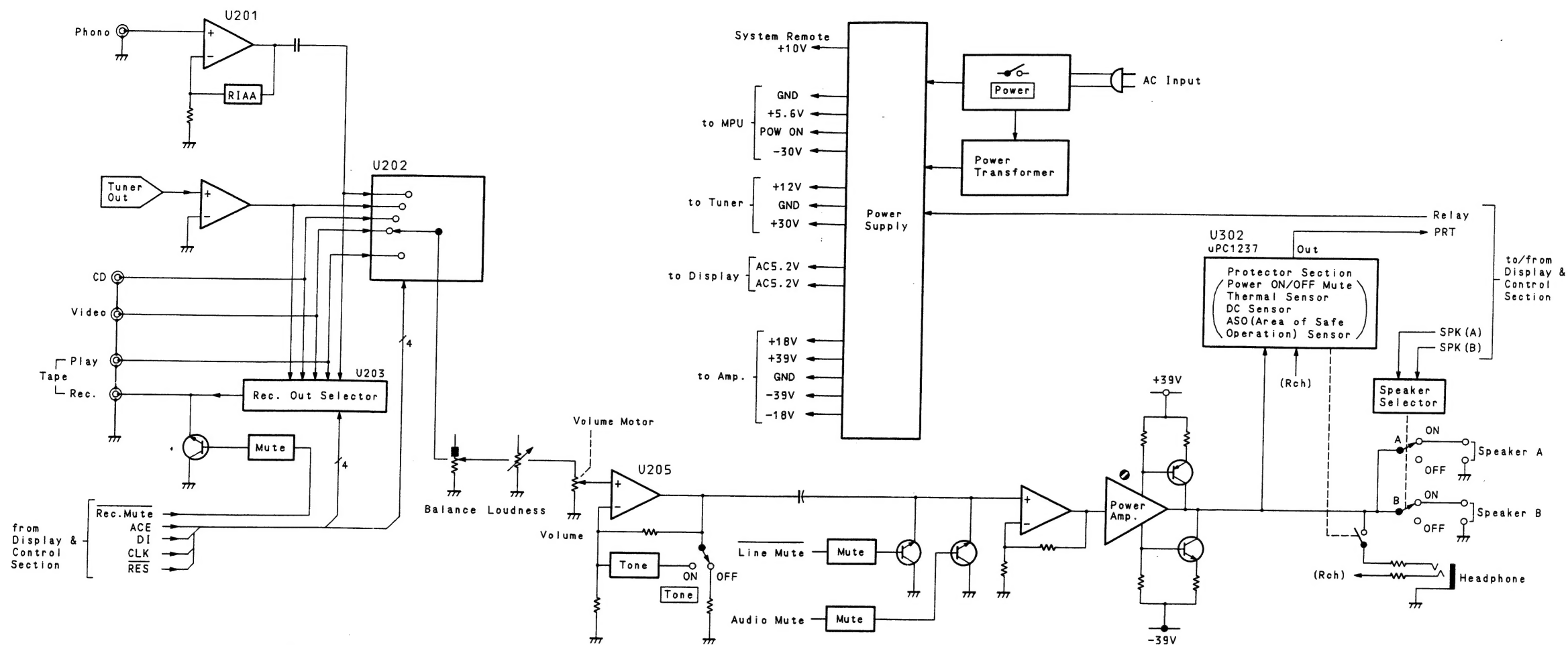


Fig. 9.2

10. SPECIFICATIONS

Power Amplifier Section

Note: Unless noted otherwise, specifications are in accordance with IHF-A-202 measured from any high-level input (CD/VIDEO/TAPE) to the speaker output.

Continuous Average Output . . . 55 watts per channel into 8 ohm, both channels driven, 20—20,000 Hz, at Power no greater than 0.1% THD  
Dynamic Output Power . . . . . 75 watts per channel into 8 ohms  
95 watts per channel into 4 ohms  
Power Bandwidth . . . . . 5—40,000 Hz  
Frequency Response . . . . . 20—20,000 Hz; +0, —0.5 dB  
5—75,000 Hz; +0, —3 dB  
Signal to Noise Ratio . . . . . Better than 100 dB re rated power  
(A-WTD, input shorted) Better than 83 dB (IHF-A-202)  
Total Harmonic Distortion . . . . Less than 0.1%  
(8 ohms, rated power,  
20 Hz—20 kHz)  
Headphone Rated Output . . . . 129 mW  
(40 ohms)  
Output Current Capability . . . . 14A peak per channel

Preamplifier Section

Note: Unless noted otherwise, specifications are in accordance with IHF-A-202. Except for sensitivity, S/N, tone control and loudness characteristics (which are measured to the speaker outputs), measurements are made from the specified input to Rec. Out.

Sensitivity (for rated output)  
Phono MM . . . . . 2.5 mV  
CD/Tape/Video . . . . . 150 mV  
Main in . . . . . 1.0 V  
Sensitivity (for 1-watt output, IHF-A-202)  
Phono MM . . . . . 0.34 mV  
CD/Tape/Video . . . . . 20 mV  
Main in . . . . . 135 mV  
Input Impedance  
Phono MM . . . . . 47 kohms  
CD/Tape/Video . . . . . 20 kohms  
Main in . . . . . 20 kohms  
Maximum Input Level (1 kHz)  
Phono MM . . . . . 180 mV  
Pre Output Level/Impedance . . 1.0 V/1 kohms  
Record Output Level/ . . . . . 150 mV/1.5 kohms  
Impedance  
Total Harmonic Distortion (1 kHz, to Rec Out, at 1 V)  
Phono MM . . . . . Less than 0.008%  
RIAA Deviation  
Phono MM . . . . . 30—20,000 Hz ±0.5 dB  
Signal-to-Noise Ratio (to speaker output, IHF-A-202)  
Phono MM . . . . . Better than 78 dB  
Tone Controls  
Bass . . . . . 20 Hz, ±10 dB  
Treble . . . . . 20 kHz, ±10 dB  
Variable Loudness . . . . . 20 Hz, +20 dB; 20 kHz, +6 dB  
(re maximum attenuation:  
—40 dB at 1 kHz)  
Subsonic Filter (Phono only) . . Cutoff Frequency 20 Hz, —6 dB/octave

Tuner Section

[FM]

Note: All RF levels in microvolts given re 300-ohm antenna input.  
Modulation: Mono 100%, Stereo Pilot 9%, Stereo Audio Signal 91%.  
(European Model; Mono 60%, Stereo Pilot 9%, Stereo Audio Signal 51%)  
All measurements made at Rec Out jack.

Frequency Range . . . . . 87.5—107.9 MHz in 200 kHz steps  
IHF Usable Sensitivity (Mono) . 12 dBf/2.2 μV  
50-dB Quieting Sensitivity  
Mono . . . . . 15.7 dBf/3.3 μV  
Stereo . . . . . 38.5 dBf/46.1 μV  
Signal-to-Noise Ratio at 65 dBf  
Mono . . . . . Better than 79 dB  
Stereo . . . . . Better than 72 dB  
Muting Threshold . . . . . 30 dBf/17.3 μV  
Frequency Response . . . . . 20—15,000 Hz ±1 dB  
Total Harmonic Distortion (1 kHz)  
Mono . . . . . Less than 0.10%  
Stereo . . . . . Less than 0.10%  
Capture Ratio . . . . . 2.0 dB  
Alternate Channel Selectivity . . 55 dB (±400 kHz)  
Stereo Separation at 1 kHz . . . Better than 50 dB  
Spurious Response Rejection . . Better than 90 dB  
Image Rejection . . . . . Better than 75 dB  
IF Rejection . . . . . Better than 80 dB  
AM Suppression . . . . . Better than 60 dB

[AM]

Note: Modulation — 400 Hz, 30%

Frequency Range . . . . . 520—1,710 kHz in 10 kHz steps  
Sensitivity . . . . . 53 dBμ/m  
Signal to Noise Ratio at . . . . . Better than 52 dB  
90 dBμ/m  
Total Harmonic Distortion at . . Less than 0.5%  
90 dBμ/m  
Selectivity . . . . . Better than 20 dB (±10 kHz)

General

Power Source . . . . . 120, 230 or 240 VAC, 50/60 Hz (According to country of sale)  
Power Consumption . . . . . 295 W max.  
Convenience Outlets . . . . . Switched: 2 (General Model)  
Switched: 1 (European and Oceanian Model)  
Dimensions\* . . . . . 430 (W) x 100 (H) x 370 (D) mm  
16-15/16 (W) x 3-15/16 (H) x 14-9/16 (D) inches  
Approximate Weight . . . . . 9.0 kg 19 lbs. 13 oz.

<Remote Control Unit>

Principle . . . . . Infrared pulse system  
Power Supply . . . . . 3 VDC (1.5 Vx2)  
Dimensions\* . . . . . 64 (W) x 18 (H) x 176 (D) mm  
2-1/2 (W) x 11/16 (H) x 6-15/16 (D) inches  
Approximate Weight . . . . . 130 g, 5 oz. (including batteries)

\*: Dimensions do not include protruding parts. Height is the panel height without feet.  
● Specifications and design are subject to change for further improvement without notice.

# Service Manual

## Receiver 2

Nakamichi Corporation/Tokyo Office  
Nakamichi America Corporation  
Nakamichi Canada  
Nakamichi Australia  
Nakamichi GmbH

Shinjuku Daiichi Seimei Bldg., 2-7-1 Nishishinjuku, Shinjuku-ku, Tokyo 163 Phone: (03) 3342-4461 Telex: 2324721 (NAKAM J)  
19701 South Vermont Ave., Torrance, CA 90502 Phone: (213) 538-8150  
276 South West, Marine Drive, Vancouver, B.C. V5X 2R4 Phone: (604) 324-7535  
Level 2, 61A Dunning Ave., Rosebery, N.S.W. 2018 Phone: (02) 313-7071/7090  
Praunheimer Landstraße 32, 6000 Frankfurt Main 90 Phone: (069) 768-2021 (Office), 2025 (Service)

0006135A